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ABSTRACT

These materials were developed as part of Wisconsin's tech prep initiative. The 25-page report describes how approximately 500 secondary and postsecondary educators who would be responsible for the initial development, implementation, and assessment of the state's grade 11-14 integrated/applied curricula attended a 2-day training workshop in February 1994. Of those educators, 160 also participated in a 4-day conference in June 1994. Participants were also eligible to compete for minigrants allowing them to implement one or more of the integrated tasks developed during the workshops. Appendixes constituting over 90% of this document include the following: lists of project work team members, leaders, and activities; project agendas and evaluation survey forms; selected raw data; survey formats; project-related correspondence; action plan; and two packages of materials from the integrated and applied curricula workshop and summer conference. Each package includes the following: workshop/conference goals; objectives; activities; agendas; transparency masters; and newly and previously published materials focusing on Wisconsin learner goals and attributes, learner outcomes and development, development of authentic tasks, student assessment, team building, coalition building, cooperative learning, leadership, learning styles, the Developing a Curriculum (DACUM) process, child development, guidance counseling, mentoring, and school improvement. (MN)

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YEAR ONE : 1993-1994

for

Wisconsin Department of Public Instruction
and
Wisconsin Technical College System

December 1, 1993 - June 30, 1994

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Abstract

There have been numerous projects and activities associated with Wisconsin's Tech Prep initiative (Wisconsin Statute 118.34). Sixteen local consortia are structured around the technical college boundaries with each consortium made up of a technical college and the K-12 school districts within each corresponding boundary. Leadership in the consortium is provided by a Tech Prep council composed of representatives from the technical college, K-12 districts, business and industry, labor, parents and the community.

The Tech Prep Leadership Group (TPLG) composed of two representatives from each consortium, one from the technical college and one representing K-12 educators has also been formed to offer advice to the Tech Prep State Management Team (TPSMT). The TPSMT emulates the spirit of Tech Prep and is made up of representatives from the Department of Public Instruction (DPI), the Wisconsin Technical College System (WTCS), and the University of Wisconsin System.

These leadership groups, at local and state level, have been charged with the responsibility to design and implement the Tech Prep initiative throughout Wisconsin. Part of that initiative is to develop, implement and assess integrated/applied curricula for grades 11-14. This report addresses the findings, conclusions and recommendations of a project that was funded to assist in beginning the integration process in Wisconsin.

The purpose of this project was to bring together Wisconsin secondary and postsecondary educators who would be responsible for the initial development, implementation and assessment of the grade levels 11-14 integrated/applied curricula. Approximately 500 secondary and postsecondary educators attended a two-day workshop in February of 1994. Of this initial group of 500 educators, approximately 160 returned to participate in a four-day conference in June of 1994. At that time, they obtained information and training in areas that will help them to become lead trainers in the development of integrated/applied curricula within their own district as well as serving as trainers for educators in other school districts.

In addition to the two-day workshops and the four-day conference, participants were also eligible to compete for minigrants allowing them to begin to implement one or more of the integrated tasks developed during the workshops. This report provides a brief overview of the minigrants that were completed. A second area that participants were

able to take advantage of involved technical assistance visits by project staff and Department of Public Instruction or Wisconsin Technical College System staff. Some of the activities associated with the technical assistance visits are described in the report.

This report provides summary evaluation data on the workshops and the Summer Conference. Also included with this report are the materials distributed to participants at the workshops and the Summer Conference.

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Integrated and Applied Curricula Project Report

Introduction

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Purpose

The purpose of this project was to bring together Wisconsin secondary and postsecondary educators who would be responsible for the initial development, implementation and assessment of the grade levels 11-14 integrated/applied curricula. Approximately 500 secondary and postsecondary educators were to attend a two-day conference during February of 1994. Of this initial group of 500 educators, approximately 200 would participate in a four-day workshop in June of 1994. At that time, they would obtain training in areas that would assist them in becoming lead trainers in the development of integrated/applied curricula within their own district as well as serving as trainers for educators in other school districts.

Approach and Design

The project was begun in November of 1993. An advisory committee was formed to work with project staff. This committee consisted of representatives from the Department of Public Instruction (DPI), Wisconsin Technical College System (WTCS), and the Integrated/Applied Curricula Work Team, a subcommittee of the Statewide Tech Prep Leadership Group (Appendix A). The initial responsibility of this group was to develop an agenda of activities for workshops to be held in early spring of 1994 for approximately 500 secondary and postsecondary educators from throughout Wisconsin. It was decided that two workshops would be conducted, with approximately 250 educators at each. This would be a more manageable number for project staff and presenters and could more easily be accommodated by conference hotels.

By early December of 1993, dates for the two workshops had been determined and locations were arranged: Stevens Point and Madison, Wisconsin. It was decided that the workshops should be held in February of 1994. An informational letter was mailed in December of 1993 to the Tech Prep leaders for the sixteen consortiums (Appendix A), outlining the objectives of the two-day workshop and providing other specifics, such as locations, procedures for registering for the workshop, and costs related to the workshop.

The objectives of the February workshops were:

1. To help educators develop a deeper appreciation of why integrated/applied curricula is necessary for student success in their life's work.
2. To implement a statewide process for training teachers to identify, write and implement integrated/applied instructional tasks.
3. To prepare a group of teachers to help their colleagues identify, write and implement integrated/applied instructional tasks so that these strategies become an integral part of the system employed by their school.
4. To create a learning environment where students are more routinely exposed to curricula that has the capacity to cause transfer of knowledge from one application to another.

Each Tech Prep consortium was to be responsible for disseminating information about these workshops to secondary and postsecondary educators within their consortium. Tech Prep leaders were to encourage high schools and technical colleges to identify teams of up to four people. Academic, vocational, special needs, and administrative staff who worked with students in grades 11-14 (2+2) were to be considered eligible to attend.

Each consortium was allowed to register 3-6 teams, with one team being composed of technical college staff. Each consortium could also send up to 12 additional individuals: parents, university teacher educators, business/industry representatives, or school district personnel.

Costs incurred for attending the workshops were to be reimbursed by the project within the following limits: travel mileage at the rate of one automobile per four individuals; motel lodging at two persons per room; and, meals during the workshops.

Approximately 500 participants registered for the two-day workshops, with an equal number at each of the two sites. In some of the consortiums, teams of individuals from schools registered for the workshop; however, in other consortiums, many of the registrants were the only individual from their school who planned on attending the workshop, as opposed to being a member of a team. In addition, due to the relatively short period of time the Tech Prep consortium leaders had to announce the workshops to school personnel, they were not able to selectively screen individuals to insure that these would be the most appropriate representatives from their consortium. As a result, not all registrants were viewed as the more appropriate choice to represent the consortium.

Appendix A includes a copy of the **Agenda** for the workshop that was held at Stevens Point, Wisconsin on February 2-3, 1994. Much of the agenda is comprised of group activities. These activities are based on the **"Target and Tasks Model"** (Appendix B) developed by the two main presenters from the Wisconsin Department of Public Instruction, John Fortier and James Moser. It was decided that "facilitators" would be used to assist participants during the group work activities. In order for the integration activities to have continuity, it seemed appropriate to identify people who would be involved in the process through the June 1994 Summer Conference. Equally important, the facilitators were to have a firm grasp of the integration process as it related to the Fortier and Moser Model that was part of Wisconsin's vision for the Learner Outcomes and curricular integration. The people who were identified were mainly those who functioned at a state level and had a stake in the overall implementation of the integration model. Many of the facilitators identified were employed either by DPI, WTCS or UW-Stout. These facilitators were recruited by project staff prior to the start of the first workshop (Appendix A). The facilitators met on the evening prior to the start of each of the workshops to review their role and responsibilities for the activities they would facilitate. The facilitators were to be involved with the group activities as follows:

Group Activity 1:

- Participants will work in discipline specific groups. There should be no more than 8 participants at a table.
- Facilitators should assist in guiding participants to correct discipline areas.
- Groups will write discipline specific authentic tasks. They should focus on one specific outcome.
- Facilitators should review the written task with each group and assist them if they are not on target.
- John Fortier will randomly review group tasks that have been developed.

Group Activity 2:

- Participants will work in interdisciplinary groups. Facilitators should encourage participants to work with individuals outside of their own consortium.
- Groups will write integrated tasks. They should focus on one specific outcome.
- Facilitators should review the written task with each group and assist them if they are not on target.
- John Fortier will randomly review group tasks that have been developed.

Group Activity 3:

- Participants will work in interdisciplinary groups.
- Groups will write integrated tasks on any outcome(s). They should think about task characteristics and evaluation and time. They must be realistic.
- Facilitators should review the written task with each group and assist them if they are not on target.
- John Fortier will randomly review group tasks that have been developed.

Group Activity 4:

- Participants will work with their home team.
- Groups will write task(s) that they intend to use when they return to their home school. They can focus on any outcome(s).
- Groups should think about implementation and evaluation.
- Facilitators should review the written tasks with each group and assist them if they are not on target.
- John Fortier will randomly review the tasks that have been developed.

The four group activities were work sessions for the participants and were interjected with discussions and ideas from the main speakers. During the work sessions, participants were to develop authentic tasks and record them on the **Task Development Record** (Appendix B). These were collected by the facilitators at the end of each of the work sessions. The Task Development Records collected at both of the workshops were to be reviewed later by project staff, with the more appropriate ones being included in an **"Authentic Task Development Records"** booklet (Appendix B) which would be distributed to all participants during March-April of 1994. Approximately one-hundred task development records were subsequently included in this booklet and distributed to the participants.

At the completion of the workshop, participants were asked to complete an **Evaluation Survey Form** on the workshop activities and sessions (Appendix A). Participants were also eligible to register for **12 DPI Equivalency Clock Hours** for attendance at the two-day workshop (Appendix A).

It should be noted that there was some variation in the agenda between the two February workshops. At the completion of the first of the two workshops (at Stevens Point), a telephone conference call was completed with project staff and advisory committee members to discuss the success of the workshop. It was the opinion of staff and committee members, based on observations and verbal comments from participants, that some group activities should be revised. Evaluation findings and written comments also suggested that some sessions needed to be revised and/or not presented at the second workshop. It was the opinion of workshop participants that time was better spent working in home school teams rather than working with individuals from other schools. The **Agenda** for the second workshop, held February 15-16, 1994 in Madison, Wisconsin, is included in Appendix A. Again, an **Evaluation Survey Form** was completed by participants (Appendix A).

Evaluation Findings for the two February workshops:

The Evaluation Survey Forms were entered into a computer file, with each workshop being entered into its own file. This was done so as to determine if the changes in the agenda from the first workshop to the second workshop had any positive effect on the participants. The **Raw Data** can be found in Appendix A. A comparison of the two workshops was completed and reported on a **Summary Evaluation Form**, found on page 7. This form indicates the number of participants who attended each of the two workshops, and provides a breakdown on where the participants work as well as their type of job. Each of the workshop topics is indicated along with the rating. Each topic was rated on a 1-5 rating scale, with 5 being the highest and 1 being the lowest. All topics received a rating above 3.00. The topics which tended to receive the higher ratings were those sessions when participants were able to complete group work activities in their home teams. It was because of the evaluation findings from the first of the two workshops, along with written comments that indicated that some sessions were not worthwhile, that changes were made in the agenda for the second workshop.

The following is a breakdown of the total number of participants who attended the February workshops in Stevens Point and Madison:

Tech Prep/K-12 Public School Consortium	**Secondary**	**Postsecondary**	**University**
Blackhawk	27	5	-
Chippewa Valley	32	5	1
Fox Valley	23	1	-
Gateway	17	4	4
Lakeshore	22	6	-
Madison Area	28	5	-
Mid-State	27	4	-
Milwaukee Area	38	-	-
Moraine Park	26	1	-
Nicolet Area	36	1	-
Northcentral	33	5	-
Northeast Wisconsin	30	7	-
Southwest Wisconsin	13	6	-
Waukesha County	28	4	-
Western Wisconsin	26	8	1
Wisconsin Indianhead	22	4	-
Unattached University	-	-	2
TOTALS* = 502	**428**	**66**	**8**

*These totals do not reflect individuals who were speakers/presenters and/or project staff.

The materials distributed to workshop participants are included in Appendix B.

SUMMARY FINDINGS OF INTEGRATED/APPLIED WORKSHOPS

The following evaluation findings are based on evaluation forms completed by participants attending the Integrated/Applied Curricula Workshops in Stevens Point (February 2-3, 1994) and Madison (February 15-16, 1994).

Participants Completing Evaluation Forms:	Stevens Point	Madison
Secondary Schools	n=139	n=133
University System	3	0
Technical Colleges	23	23
Other	12	5

Job Position of Participants Completing Evaluation Forms:	Stevens Point	Madison
Academic Teachers	n=68	n=68
Curriculum Coordinators	14	7
District Administrators	1	2
General Education Instructors	6	6
Guidance	7	1
LVEC/Tech Prep Coordinators	14	17
Principal/Assistant Principal	4	9
Special Needs	14	5
Vocational Teachers	42	46

The following information is summarized by providing the **median** for each of the workshop topics. A one indicates that the topic was definitely not useful for the workshop participants and five indicates that the topic was extremely useful. A three indicated that the participant was unsure.

Workshop Topics	Stevens Point	Madison
Putting the Pieces Together:	3.28	(not done)
Targets and Tasks:	3.80	3.83
Group 1 Activity -- Authentic Task Development by Discipline:	3.86	3.79
Group 2 Activity -- By Interdisciplinary Groups:	3.95	(not done)
Group 2 Activity -- By Home Teams:	(not done)	4.29
Group 3 Activity -- By Interdisciplinary Group:	3.90	(not done)
Group 4 Activity -- By Home Team:	4.24	(not done)
Group 3 Activity -- By Home Team:	(not done)	4.09
Overall Rating for Conference:	3.55	3.82

Post Workshop Activities

At the time of the two February workshops, participants were made aware of two activities in which they could elect to participate during the time period of March-May of 1994. First, participants could submit a proposal to project staff to complete a minigrant. Second, participants could contact project staff and schedule a technical assistance visit. Each of these two options are discussed below.

Mini-grants

One of the activities of the project was to make available mini-grants to individuals who attended one of the two workshops on integrated and applied curricula development in February of 1994. The purpose of these mini-grants was to encourage local school district teams to implement one or more of the task activities developed at the workshops. The maximum amount of each of the sixty mini-grants available was $500. These sixty mini-grants were to be spread across all sixteen consortiums in Wisconsin. The mini-grants could be used to: purchase resources needed to implement the task activities, fund teacher or substitute teacher salaries, cover travel costs directly associated with implementing a task activity, and, purchase reference materials, supplies for learning activities and duplicating costs. Schools were required to submit an Integrated/Applied Curriculum Development Small Grant Application (Appendix A). Schools approved for mini-grants were required to complete their activities and submit a final report prior to the end of June 1994.

Twenty-six Wisconsin schools completed mini-grants during the time period of March-June 1994. Although the project had money sufficient to fund a total of sixty mini-grants, fewer than sixty schools made application for mini-grant funds, and, only one-half were approved for funding. Those not receiving funding were denied for the following reasons: being intended for students at levels below the high school level; being used for field trips scheduled for travel outside of Wisconsin; being used solely for the purpose of purchasing equipment; being used for activities that would be completed beyond the timelines established for the mini-grants; and, applications for mini-grants being made by individuals who had not attended the integrated and applied workshop in February of 1994.

The following is a listing of the schools who completed a mini-grant and a brief overview of the intent of their mini-grant:

1. Alexander Hamilton High School
   To allow one class of ninth grade students to analyze the tardy room problem and attempt to solve it. The problem solving task was integrated with teachers in English, Math, Science, Social Studies, and Communication Technology.

2. Athens High School
   To allow release time for Math, Art, Technology and English teachers to develop and coordinate integrated/applied units of study. These units of study would represent the first of their kind in Athens and serve as the test of their effectiveness, eventually becoming the models for further unit development.

3. Blackhawk Technical College
   To create a curriculum/resource library that all consortium schools can utilize through a check-out system. Objectives included: providing up-to-date print material focusing on integrated/applied curriculum, tech prep, school-to-work, and authentic assessment; designing and creating wall posters of the WI Learner Goals & Outcomes and disseminating them to all consortium schools; and, ensuring that "model" activities and projects within consortium schools and throughout the state are disseminated to all consortium schools.

4. Cadott Junior/Senior High School
   To purchase necessary computer software that will aid students to effectively communicate for a variety of purposes and in a variety of ways. A lab pack of 10 copies of Lotus Freelance Graphics was purchased and used by students to give presentations. The software will also be used next school term for courses being co-taught by academic and vocational teachers.

5. Clinton High School

To purchase a videodisk and related materials entitled "Physics of Sports" and allow teachers of physics, math, communications, and physical education to develop the project. Students were to analyze athletic performances using physics, kinesiology, and qualitative data collection. Their recommendations for performance improvement was to be presented using written and verbal communication.

6. Darlington High School

To purchase VHS video tapes and print materials in the Communications Connection covering: Construction, Accounting and Office Systems, and, Production Technology. The materials were used within technology, business and office, industrial communications, basic communications, and 9-10 English skills classrooms. Students completed worksheets, crossword puzzles and related their understanding of the material through class discussions.

7. D. C. Everest High School

To plan and implement activities to integrate math and consumer education concepts, specifically in the area of consideration of automobile purchase and leasing options. Students will complete a pre and post-test to determine if they can use appropriate communication and computation skills to decide whether to purchase or lease a vehicle.

8. Edgar High School

To complete a project which originated at the February Integrated/Applied workshop as well as beginning the planning of a large scale integrated/applied project for the coming school year. The current year project was to produce a finished Writing Booklet involving three subject areas. Planning was completed by the Tech Prep team for the construction of a greenhouse facility.

9. Franklin, Greendale, Greenfield and Whitnall High Schools

To purchase a set of career films, "The Video Guide to Occupational Exploration", appropriate to integrated and applied instruction, to be shared by the Southwest Consortium of Franklin, Greendale, Greenfield and Whitnall school districts.

10. Horicon High School

    To produce a literary magazine, involving students enrolled in English, Technology Education, Business Education and Art classes.

11. Howards Grove High School

    To execute a pilot lesson plan on drafting a mock legislative bill on crime as a class project to share with the rest of the faculty so they may learn how easily curriculum can be adapted into exciting, relevant outcomes using the principles of integrated and applied curriculum development.

12. Juda High School

    To tour four businesses with 9th and 10th grade students. Students were responsible for taking notes on career evaluation sheets and subsequently preparing and presenting a four minute class presentation on the career/job which most appealed to them.

13. Laona High School

    To obtain curriculum courseware in Applied Math, Applied English, and, Business Education/Career Training and implement curriculum modifications in courses in vocational education and applied courses in academic education using this courseware.

14. Loyal High School

    To redesign and rewrite the "Introductory Physical Science Course" at the Freshman level, which will be team-taught by Technology Education and Science teachers in the coming year, and, to improve the curriculum for the "Preparatory English II Course" at the Senior level, which is designed to allow seniors to either enter a technical college program or to go directly into the job market.

15. Manitowoc Lincoln High School

    To further develop the task activities as identified by two teams at the February Integrate/Applied workshop. Team A was to develop, pilot, and evaluate the task for a new course "Career Communications." Team B was to develop, pilot, and evaluate the task activities for Biology/Geometry classes that are integrated for their careers unit.

16. Menomonie High School

To develop a series of integrated activities to be implemented during the summer of 1994 as a portion of the curriculum for a science/mathematics/technology team taught high school class. Three teaching activities were developed using the targets and tasks model. All three units were integrated with science as the major theme or "home" but each incorporated a strong dependency on mathematics, particularly measurement, and technology, construction and electronics, as vehicles to apply the science principles.

17. Necedah High School

To tour several different businesses in La Crosse that deal with communication each and every day in a variety of ways with two Applied Communications classes, one from Necedah and one from New Lisbon. Students were required to write an article for the newspaper and a letter to the school board explaining what they had seen and its impact on them.

18. New Berlin Eisenhower High School

To provide time and resources to initiate appropriate tasks for a Food Service & Chemistry Integrated/Applied Curriculum development activity that originated at a February Integrated/Applied workshop. The resources were used to develop student activities relevant to caloric intake and expenditure by students with related educational experiences in nutrition, health, chemistry, computer applications, and other sciences.

19. New Lisbon High School

To write curriculum using the model presented at the February Integrated and Applied workshop; to work on writing authentic tasks and assessments using the Wisconsin Targets and Tasks Model as a guide; and, to incorporate and pilot the tasks designed in the "Writing and Communications Course."

20. Pulaski High School

To begin to implement the integration of academic and vocational competencies into the 9-12 curriculum by providing the CORD "Principles of Technology" and "Applied Biology and Chemistry" courses.

21. St. Croix Falls School District

To provide release time for tech prep team members to visit area schools that are currently implementing integrated/applied curriculum so as to gain insights into what is being done, how it is implemented, and how it is working.

22. Three Lakes High School

To provide release time for the Three Lakes Core Group to further develop and implement an integrated task. The release time allowed for organizing and coordinating four different disciplines to complete the integrated task.

23. Tomahawk High School

To obtain a set of materials for year one from the CORD series of Applied Mathematics to enable the Math Department to complete curriculum writing and planning for a new Tech Prep and Applied Mathematics course.

24. Unity High School

To develop a project integrating objectives from American history, English composition and literature. Students learned to find an abstract idea, intolerance, when presented in new situations and applied skills learned in a variety of disciplines to analyze the information presented and communicated what they had discovered through one of several options provided, including written, oral, graphic arts and performing arts choices.

25. Wabeno High School

To obtain CORD curriculum materials in Applied Communication, Applied Math, and Biology and Chemistry so as to have the resources necessary to continue working toward an applied curriculum.

26. Waukesha South High School

To fund the materials and resources necessary to implement the facilitation of a specific integrated/applied task on the creation of career commercials.

Technical Assistance Visits

A significant aspect of the project was to make available technical assistance to the Tech Prep Consortia teams that participated in the February workshops. Many teams had attended other integrated and applied curriculum workshops as staff development activities sponsored by their school, CESA or Tech Prep Consortium. As a result, those teams were operating at different levels of integration and application of curricular efforts. The purpose of the technical assistance visits was to provide customized support to the individual teams and consortia. With help from the project advisory committee and the TPLG, a post conference activity agenda was developed. This agenda was offered as a tentative starting point for the technical assistance activities (Appendix A). Each consortium was encouraged to make changes that would allow for inclusion of individual activities that had been accomplished within their district.

Each Tech Prep Consortium coordinator was notified that technical assistance would be available between March 28 and May 20, 1994. The project staff felt it was important to allow the teams and participants maximum flexibility to access technical assistance. The Tech Prep Consortia were provided with opportunities to schedule activities during school, after school, evenings or Saturdays. The consortium coordinators were given a survey instrument that asked them to select the time and date that they would prefer for a technical assistance visit (Appendix A). Additionally, they were asked how they would like to structure the delivery of the assistance. Once they had selected their options, they were responsible for arranging facilities and notifying the participants.

The project director, Michael J. Galloy, facilitated the meetings. The Tech Prep state consultants, Mary Jane Best-Louther from DPI and Gabrielle Wacker from WTCS, were invited to attend all meetings.

Of the 16 Tech Prep consortiums surveyed, 11 responded. Of the 11 respondents, one consortium declined technical assistance during the time available. One of the responses came directly from the CESA office within that consortium. The following list provides the Tech Prep consortium name, the participants who were invited, and the dates and times that the technical assistance activities were conducted.

1. Chippewa Valley Tech Prep Consortium
   All consortium teams invited
   April 14, 1994
   5:00 to 8: 00 p.m.

2. Waukesha County Tech Prep Consortium
All consortium teams invited
April 25, 1994
3:30 to 6:15 p.m.

3. Madison Area Tech Prep Consortium
All consortium teams invited
May 2, 1994
12:00 to 3:00 p.m.

4. Northcentral Tech Prep Consortium
Edgar School District Team
3:15 to 6:00 p.m.

5. Mid-State Tech Prep Consortium
All consortium teams invited
May 6, 1994
8:30 to 12:00 p.m.

6. CESA 7, Green Bay
CESA 7 teams invited
May 12, 1994
1:15 to 3:45 p.m.

7. Nicolet Area Tech Prep Consortium
All consortium teams invited
May 17, 1994
4:00 to 7:00 p.m.

8. Wisconsin Indianhead Tech Prep Consortium
Maple School District Team
May 18. 1994
1:00 to 3:30 p.m.

9. Gateway Tech Prep Consortium
All consortium teams invited
May 19, 1994
3:30 to 6:00 p.m.

10. Northcentral Tech Prep Consortium
D.C. Everest School District
May 24, 1994
2:00 to 5:00 p.m.

11. Milwaukee Area Tech Prep Consortium
All consortium teams invited
May 26, 1994
1:00 to 4:00 p.m.

12. Lakeshore Area Tech Prep Consortium
No technical assistance requested at this time

At the consortium wide meetings, attendance ranged from a low of 8 participants to a high of 24 participants, with the average being 14. The individual teams that were visited had a full team of 4 participants.

In general, the participants stated they had little or no opportunity to try integration activities. Topical strategies discussed were: finding time to plan activities; finding time to meet with their team; devising authentic assessment instruments; developing tasks that are integrative; developing tasks that are applied; getting administrative support; and, getting other faculty support.

This activity proved quite informative. All of the teams are at different stages of integrated and applied curricular activities and are operating under administrative actions unique to their school districts. Future planning needs to include more efforts in direct contact at school level and continued efforts in building the consortium wide integrated and applied curriculum network.

Visit to Aurora Public Schools-Aurora, Colorado

Many of the principles and concepts that are integral parts of this project are similar to the an integrated and applied curriculum effort currently underway in the Aurora Public Schools (APS) in Aurora, Colorado. Since the APS efforts have been operational for several years, it was decided that this project could benefit from a visit to that school system. Michael J. Galloy, Project Director, Mary Jane Best-Louther, DPI Tech Prep Consultant and Lyle Martens, Tech Prep Coordinator for CESA 7 participated in a workshop, scheduled from June 1 to June 3, 1994, at the APS central office. This visit was useful for proceeding with the current year project activities and for planning for future year's activities.

Integrated/Applied Curricula Summer Conference

Immediately after the two February workshops had been completed, project staff reviewed the evaluation comments and analyzed the data. This information was beneficial as the project staff began to outline the types of activities that could be included in the Summer Conference.

After an outline of an Agenda for the Summer Conference had been developed, it was mailed to advisory committee members and DPI/WTCS staff for review and comments. A conference telephone call was arranged and all individuals presented their views on the proposed topics. Recommendations were made by committee members for speakers for various topics.

Project staff revised the **Summer Conference Agenda** as recommended by the advisory committee (Appendix A). Individuals were then contacted to determine interest in presenting at the Summer Conference. Presenters were requested to forward a copy of any handouts they intended to provide to participants prior to the conference so that adequate copies could be duplicated.

Tech Prep consortium leaders were mailed preliminary information on the Summer Conference in mid-April of 1994. They were provided information on: the participant/team selection process; the procedures to be used in pre-registering participants for the conference; the Summer Conference registration form; a tentative agenda; an informational bulletin that included motel sites; and, information on obtaining college credit for participating in the four-day conference (Appendix A). The Tech Prep consortium leaders were instructed to identify a maximum of fourteen participants for the Summer Conference. Additional information on participant recruitment procedures had been previously sent to the Tech Prep leaders by DPI/WTCS staff in mid-March (Appendix A).

During April-June of 1994, Tech Prep consortium leaders announced the Summer Conference to secondary and postsecondary educators within their district. When they had their participants identified, the registration forms were mailed to project staff. Then, in early June, participants were mailed additional information on the Summer Conference (Appendix A). The registration packet included: conference and parking locations; the finalized Agenda; telephone message center; dorm registration (if requested); a survey on break-out and optional sessions; and, a registration information sheet.. For attendance at the four-day conference, and for completing an action plan, participants were eligible to receive one graduate credit from the University of Wisconsin - Stout, provided they pay a segregated student fee of $15.02. As an alternative, participants were eligible to receive **30 DPI Equivalency Clock Hours** for attending the four-day conference (Appendix A).

Consortium leaders were instructed to forward the information to those individuals within their consortium who had attended the February 1994 workshops. These were the individuals who were to be given priority in registering for the Summer Conference. Consortiums could register other individuals who were knowledgeable of Wisconsin's integrated and applied curricula process provided they had slots remaining. Approval for these individuals to attend the conference was to be left to project staff and was to be based on the consortium leader submitting a letter justifying the individual's background in this process. Each consortium was to be permitted to register a maximum of 14 participants for attendance at the Summer Conference. If one or more consortiums were unable to send a full compliment of participants, other consortiums would be notified and then be able to register additional participants. Each Tech Prep consortium received additional funding that would reimburse Summer Conference participants for their transportation, food, and motel costs as well as provide them with a stipend for attending the four-day conference.

The Summer Conference was held on the University of Wisconsin-Stout's campus during June 20-23, 1994. Although it had been planned that 200 of the 500 secondary and postsecondary educators who attended the February workshops would attend this conference, the actual number who registered was 148. The main reason for not being able to register for the conference, as indicated by the Tech Prep consortium leaders, was that there were other related activities occurring at the same time in other locations throughout Wisconsin, and participants from the February workshops had to make a choice between the activities.

The conference was four days in length and was designed to take participants through a series of lectures and work sessions which would improve their knowledge base of skills necessary to assist others in learning activities related to the integrated and applied curricula process designed for Wisconsin schools. The lecture periods were conducted before the entire group of participants; however, during the work session periods, participants were divided into their home Tech Prep consortium. Participants could then break into home school teams, depending on the activity and whether the Tech Prep leader for that consortium approved.

When participants registered for the Summer Conference, one of the questions on the form asked if they and/or others in their school would want to participate in the share and tell sessions that would occur on two days of the conference.. During this time period, participants could share activities they have been involved with on the implementation of integrated and applied curricula. If so, they were to indicate any equipment/materials needs to assist them with their presentation. In reviewing the registration forms, there were individuals from fifteen schools who indicated that they would participate in the share and tell sessions during the conference. Equipment and materials were scheduled to be made available for these individuals. However, at the time of the conference, only three of these schools actually participated in the share and tell session. It was unknown as to why the other schools did not participate in the share and tell sessions.

The culmination of the four days was that each school completed an **Action Plan** for the process they would use in implementing integrated and applied activities within their school (Appendix A). In addition to individual school teams completing action plans, several of the consortiums also chose to have their participants develop an action plan for the consortium itself. Copies of the action plans were provided to each participant for that action plan. Action Plans developed by each school in the Tech Prep consortium were mailed to each Tech Prep consortium leader after the Summer Conference had been completed. At the same time, correspondence was sent to each of the sixteen Tech Prep consortium leaders by DPI and WTCS staff requesting that each consortium leader conduct a follow up meeting with their participants to review the action plans that had been developed. Only six of the sixteen Tech Prep consortium leaders had attended the Summer Conference and it was important that they both be aware of the action plans developed by their participants and take leadership in furthering integrated and applied curricula activities within their consortium.

At the end of the conference, participants were asked to complete an **Evaluation Form** and make any written comments on their experiences at the conference (Appendix A). **The Summary Findings of the Evaluation** can be found on pages 20-21. The written comments are included in Appendix A along with the **Raw Data**. Appendix C of this report includes the material that was distributed to each participant during the four-day conference.

EVALUATION FINDINGS
Integrated/Applied Curricula Summer Conference

5=E=Excellent
4=VG=Very Good
3=G=Good
2=F=Fair
1=P=Poor

N=117

	Mean is based only on those answering the item number	MEAN
Monday, June 20		
1.	Keynote speaker: "Curriculum Change: Innovations, Integration and Application."	4.46
2.	Team Building Skills	3.64
3.	Team Building Simulation	3.77
4.	WI Integrated and Applied Curriculum Development Process - The Framework and Process for Integrated and Applied Curricula Model	2.90
Tuesday, June 21		
5.	Panel Presentation on WI Integrated and Applied Curriculum Development Process	3.46
6.	Home Team Work on Applying the Process to Their Schools	3.56
7.	Share and Tell	2.67
8.	Teaching Strategies for Integrated and Applied Curriculum Materials - Cooperative Learning	3.61
9-15.	Special Interest Sessions. Rate Each Session Attended.	
9.	Learning Styles	4.13
10.	Needs Assessment Techniques	4.17
11.	Leadership Styles	4.17
12.	Multiple Intelligences	3.29
13.	Tie in WI Developmental Guidance Model with Learner Outcomes	3.80
14.	Teaching Strategies	4.17
15.	Integration Techniques	3.91
16.	DACUM	4.00

Mean is based only on those answering the item number	MEAN

Wednesday, June 22

17.	Authentic Assessment - Strategies and Tools	3.61
18.	Home Team Work on Strategies, etc.	3.51
19.	Share and Tell	2.72
20.	Organizational and Personal Change	3.28
21.	Work Session - Application of Change Techniques	3.18
22.	7 Habits of Highly Effective People	3.45
23.	Mentoring	4.43

Thursday, June 23

24.	Roles of the Integration and Applied Curriculum Leadership Cadre	3.40
25.	Strategic Planning Techniques	3.84
26.	Home Team Work on Strategic Plans	3.99
27.	Action Planning	3.86
28.	Home Team Work on Action Plans	4.03
29.	Overall Rating of Conference	3.44
30.	Breaks	4.44
31.	Facilities	4.07

32. Please write any comments regarding any of the sessions below:

65% of the respondents made written comments.

Several of the major themes from the written comments include the following:

a) **Participants would have liked to have received the information on strategic planning and developing an action plan towards the beginning of the conference.** ***The planning committee had decided that these sessions should be placed towards the end of the conference. The purpose of the conference was to provide participants with building blocks they could use to assist them in developing an action plan and the sessions on the first three days focused on these blocks. It was felt that if participants completed an action plan on the first day, they would not have the parts necessary to develop this plan.***

b) Participants indicated that they would have preferred to do most, if not all, work sessions with their home school team rather than meet as a Tech Prep consortium. Participants felt that they could have accomplished more that would directly reflect would was occurring in their own school system.

33. Finally, having attended this conference, please indicate areas that you feel you need to receive additional information in order to accomplish trainer responsibilities.

68% of the respondents made written comments.

Participants suggested the following areas: Team Building; Team Training; Writing Integrated Tasks; Follow-Up Conference; Authentic Assessment;

Evaluation Findings from the Summer Conference

Many of the sessions in the Summer Conference received evaluation ratings in the good (3.00) to very good (4.00) range, with only three sessions receiving ratings below 3.00. Two of these sessions involved the "share and tell" session where schools who had indicated a desire to share and tell prior to the conference did not follow through with the session at the conference.

The following is a breakdown of the participants who attended the Summer Conference in June 1994.

Tech Prep/K-12 Public School Consortium	Secondary	Postsecondary	University
Blackhawk	12	2	1
Chippewa Valley	7	3	1
Fox Valley	6	-	-
Gateway	13	-	-
Lakeshore	9	3	-
Madison Area	8	-	-
Mid-State	2	1	-
Milwaukee Area	16	-	-
Moraine Park	7	-	-
Nicolet Area	10	1	-
Northcentral	2	1	-
Northeast Wisconsin	6	1	-
Southwest Wisconsin	2	1	-
Waukesha County	10	1	-
Western Wisconsin	9	2	-
Wisconsin Indianhead	8	2	-
Unattached University	-	-	1
TOTALS* = 148	**127**	**18**	**3**

*These totals do not reflect individuals who were speakers/presenters and/or project staff.

A listing of all school participants, speakers and project staff who attended the June 1994 Summer Conference can be found in Appendix A.

As an acknowledgment to participants for attending the four-day Summer Conference, each was awarded with a certificate (Appendix A). Those who had signed up for the one graduate credit received a grade based on attending the four-day conference and for completing an Action Plan, whether developed individually or with a team.

Recommendations

The following recommendations are made based on observations and verbal/written evaluation findings by participants and/or project staff, advisory committee members and DPI/WTCS staff.

1. Continue to develop the skills of those participants designated as trainers/mentors.
   a. Provide technical assistance to these participants, their home school teams, and their Tech Prep consortiums during the 1994-95 school year and beyond.
   b. Provide regional workshops to these participants to review and expand their skills in areas necessary to train others in the integrated and applied curricula development process.
   c. Provide a newsletter for these participants to apprise them of activities in Wisconsin that are related to the development of integrated and applied curricula.

2. Conduct a Summer Conference in June of 1995 with these same trainers.
   a. Develop training based on needs of the trainers after conducting a needs assessment with them.
   b. Allow others to participate in the conference, based on recommendations from these trainers.
   c. Consider providing these individuals with work assignments prior to the conference so that more can be accomplished in a shorter period of time.

3. If possible, provide moneys which could be used by qualified participants to complete minigrant activities.
   a. Provide for six-eight months duration to complete minigrant activities and submit a final report.
   b. Require that recipients of the minigrants share their project activities with participants during the Summer Conference.

4. Expand the group of trainers by bringing in individuals to the process who have not participated in the Summer Conference.
    a. Due to prior commitments and conflicting schedules, several Tech Prep consortiums were unable to register a full team for the Summer Conference. These consortiums may need additional technical assistance and/or training to bring a sufficient number of participants up to the level of being lead trainers.

5. Create a database of integrated and applied tasks that could be easily accessed by individuals and/or school systems throughout Wisconsin.

6. Involve business and industry to provide a basis for identification for identifying applications and authentic assessments.

Appendix A

1. Tech Prep Leadership Group Curriculum/Staff Development Work Team
2. Tech Prep Consortium Leaders
3. Agenda for February 2-3, 1994 Workshop in Stevens Point, Wisconsin
4. Facilitator Letter/Activities
5. Evaluation Survey Form - Stevens Point Workshop
6. DPI Equivalency Clock Hour Approval Letter - Workshops
7. Agenda for February 15-16, 1994 Workshop in Madison, Wisconsin
8. Evaluation Survey Form - Madison Workshop
9. Raw Data - Stevens Point
   Raw Data - Madison
10. Integrated/Applied Curriculum Development Small Grant Application
11. Format for Follow Up of Technical Assistance Activities
12. Format for Follow Up of Technical Assistance Survey
13. Summer Conference Agenda
14. Preliminary Information Letter on Summer Conference
15. DPI/WTCS Letter to Tech Prep Consortium Leaders
16. Additional Information Letter on Summer Conference
17. DPI Equivalency Clock Hour Approval Letter - Summer Conference
18. Action Plan
19. Evaluation Survey Form - Summer Conference
20. Participants/Speakers/Project Staff Attending Summer Conference
21. Certificate

①

Tech Prep Leadership Group Curriculum/Staff Development Work Team

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School-to-Work Partnership
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(2)

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(3)

Applied/Integrated Curriculum Workshop

February 2-3, 1994 **Holiday Inn-Stevens Point, WI**

February 1, 1994	**Pre-Conference Workshop**
6:30 p.m.	Meet in Restaurant for Dinner. Discuss role of facilitator during the two-day workshop.
8:00 p.m.	Adjourn from dinner to the main conference room. Pre-conference preview of room set-up and locations for the facilitators. Set out materials required of the facilitators.

Applied/Integrated Curriculum Workshop

February 2-3, 1994 **Holiday Inn-Stevens Point, WI**

February 2 Wednesday

7:00 - 8:30 a.m. **Registration /Breakfast Buffet** (provided by conference)

8:45 a.m. **Welcome and Introductions** (Mike Galloy, UW-Stout)

- Introduction of Guests and Participants
- Overview of Project
- Intent of Workshop
- Expenses paid by project

"Putting The Pieces Together" (Mary Jane Best-Louther, DPI and Kathleen Paris, Leadership Institute, UW-Madison)

- Background Information
- Connection to Other Initiatives
- State Vision

Target and Tasks (John Fortier and James Moser, DPI)

- Learner Outcomes
- Educational Targets
- Authentic Tasks and Enablers

Break -Groups should continue with activity during break period. Coffee, Tea, Juice. provided.

Group Activity 1

- Authentic Task Development (Grouped by Discipline)

12:00 **LUNCH** (provided by conference)

1:00 p.m. **Group Activity 2**

- Authentic Task Development (Work in Interdisciplinary Groups)
- Focus on Specific Outcome

Break-Coffee, Tea, Soda available.

Group Activity 3

- Authentic Task Development (Work in Interdisciplinary Groups)
- Focus on Any Outcome

4:00 p.m. **Recap of Activities**

4:30 p.m. **Reception** (Cash Bar)

5:30 **Banquet** (provided by conference)
"Applied and Integrated Curriculum within School to Work Transition"

Presenter: Kathleen Paris, Director, Leadership Institute for School to Work Transition, Center on Education and Work, UW-Madison

February 3 Thursday

7:00 - 8:30 a.m. **Breakfast Buffet** (provided by conference)

8:30 a.m. **Group Activity 3 Continues**

Break -Groups should continue with activity during break period.
Coffee, Tea, Juice. provided.

Group Activity 4 (School Teams work Together)

- Authentic Task Development, Implementation and Assessment
- Focus on Tasks that will be Implemented in Succeeding Months

12:00 **LUNCH** (provided by conference)

1:00 p.m. **Group Activity 4 Continues**

Break -Groups should continue with activity during break period.
Coffee, Tea, Soda provided.

3:00 p.m. **Summary**

- Assignments
- June Workshop
- Small Grant Application
- Travel Expense Forms
- Evaluation Form

NOTE: Travel Expense Forms must be completed and turned in prior to departure. If you must depart prior to the end of the conference, please contact Alan Gilbertson so the forms can be completed and checked for accuracy.

(4)

University of Wisconsin-Stout
Menomonie, Wisconsin 54751-0790

MEMORANDUM

TO: Facilitators
Integrated Curricula Workshops

FROM: Mike Galloy
UW-Stout

DATE: January 21, 1994

RE: Activity Plan for Workshops

I want to thank you for your willingness to share your valuable time and help coordinate the activities for the *Integrated Curricula Workshops* sponsored by the Department of Public Instruction and Technical College System. We have registered a full house at both of the conference sites so your help in coordinating activities is vital to the success of the workshops.

To help you feel comfortable with the various activities that are going to be taking place, we will host a facilitator workshop the evening before the opening session. We will meet on February 1, 1994 at 6:30 PM in the restaurant at the Holidome in Stevens Point for a dinner meeting. For the Madison workshop, we will meet at the restaurant at the Sheraton for a 6:30 dinner meeting on February 14, 1994. The Conference Agenda and a Facilitator Information sheet is enclosed. Please review this prior to the conference. Please let me know if you are able to attend or have any other questions.

Thank you again for your support. We look forward to working with you at the conferences. You can contact me at (715) 232-2163.

WORKSHOP ACTIVITIES
PROCESS STEPS

ACTIVITY I--Teams of 2, discipline specific.

Facilitators for this activity are selected TPLG Work Team Members and State Staff.

1. Select a specific learner outcome. This will help to focus your task.

2. Identify discipline specific skills and knowledge (enablers) that students must demonstrate to achieve outcome.

3. Develop authentic tasks that students will engage in to accomplish the learner outcome. Beware of novelty or "busy work" types of activities.

4. Share and receive feedback from other teams at your table. Exchange task development sheets and help each other to focus on authenticity and learner outcome.

5. If teams or individuals have questions, write them down on one of the notecards on the table and give it to a facilitator to pass to presenter.

6. Presenter will answer questions and review selected tasks.

ACTIVITY II--Home teams.

Facilitators for this activity are those from above. Additionally, Tech Prep Consortium district leaders, secondary and postsecondary, will facilitate the developmental process in their respective home districts.

1. Select a specific outcome.

2. Identify primary enablers (those most significant) that students must be able to demonstrate in order to accomplish outcomes.

3. Develop a work oriented task that integrates academic enablers with vocational enablers.

4. Develop an academically oriented task that integrates vocational enablers with academic enablers.

5. Share and receive feedback from another team at your table. Exchange task development sheets and help each other focus on authenticity and learner outcome.

6. If teams or individuals have questions, write them down on one of the notecards on the table and give it to a facilitator to pass to presenter.

7. Presenter will answer questions and review selected tasks.

ACTIVITY III--Home Teams.

Facilitators for this activity will be the same as those in previous activity.

Repeat steps 1-7 as in **ACTIVITY II**. Incorporate the following as the presenter unveils additional information.

1. Focus on the reality of the task. Can this task really be used in the classroom? Is their an authentic connection between this task and the realities of work and life?

2. Define implementation strategies that can be used in your home school environment. Are there constraints that must be considered (facilities, time periods, schedules...)? Can the task be completed in a reasonable amount of time (2-3 days)?

3. Begin to develop performance based assessment procedures that will allow students to demonstrate their ability to achieve the outcomes.

4. Share and receive feedback from another team at your table. Exchange task development sheets and help each other focus on authenticity, implementation strategies and assessment.

5. If teams or individuals have questions, write them down on one of the notecards on the table and give it to a facilitator to pass to presenter.

ACTION PLAN & DEBRIEFING--Individuals and home teams.

Primary facilitators will be the Tech Prep consortium district leaders from previous activities.

1. Begin to **plan activities** that you will do when you return to your home school. The suggested plan will help focus on some activities you can do. Feel free to expand or modify these activities as needed.
2. **Schedule meetings** with your integration partners, in home schools or other schools in your district. School reform can be most effective when it begins at the grassroots level. That's you and your partners!
3. **Review Mini-Grant proposal**. Meet with your home teams and brainstorm ideas how the money can be most effectively used for integration.
4. Brainstorm ideas for **follow up activities** and pass them along to your Tech Prep Director. Remain involved in consortium wide planning for future activities.
5. Plan to attend the **June workshop, June 20 -24, 1994 at UW- Stout.** It will build off of the activities conducted between now and then.

Evaluation

Applied/Integrated Curricula Workshop

Stevens Point Holidome
February 2 and 3, 1994

1. Check the following which most accurately describes your primary place of employment (check one):

1._____DPI
2._____Secondary School System
3._____University System
4._____VTAE College
5._____WBVTAE
6._____Other

2. Check the area that most accurately describes your position:

1._____Academic Teacher
2._____Curriculum Coordinator
3._____District Administrator/Superintendent
4._____General Education Instructor
5._____Guidance
6._____LVEC/Tech Prep Coordinator
7._____Principal/Assistant Principal
8._____Special Needs
9._____Vocational Teacher
10._____Other

General Session Evaluation

Please comment on the usefulness of the information/activity for your school's applied/integrated curricula. For each of the items, circle the number that corresponds to the usefulness of the session for you. Feel free to make additional comments.

5 - Extremely Useful (EU)
4 - Useful
3 - Unsure (?)
2 - Not Useful
1 - Definitely Not Useful (DNU)

Wednesday, February 2 EU 4 ? 2 DNU

3. Putting the Pieces Together (Best-Louther/Paris) 5 4 3 2 1
Comments____
____
____

4. Targets and Tasks--John Fortier and Jim Moser 5 4 3 2 1
Comments____
____
____

5. Group 1 Activity--Authentic Task Development by Discipline 5 4 3 2 1
Comments____
____
____

EU 4 ? 2 DNU

6. Group 2 Activity--Developing Authentic Tasks by Interdisciplinary Groups 5 4 3 2 1
Comments____
____
____

7. Dinner Speaker--Kathleen Paris 5 4 3 2 1
Comments____
____
____

Thursday, February 3

8. Group 3 Activity--Authentic Task Development by Interdisciplinary Groups 5 4 3 2 1
Comments____
____
____

9. Group 4 Activity--Authentic Task Development by School Teams 5 4 3 2 1
Comments____
____
____

Overall Applied/Integrated Curricula Workshop

10. Facility comments (meals, breaks, sleeping rooms, conference rooms, temperature, hotel staff, etc.) 5 4 3 2 1
Comments____
____
____

11. Overall, how would you rate the Applied/Integrated Curricula Workshop? 5 4 3 2 1

12. Any other comments_____________________________
____
____

Thank you for taking the time to complete this!
Please Return Survey to Facilitators or Drop in Box at Registration Table.

⑥

State of Wisconsin
Department of Public Instruction

Mailing Address: P.O. Box 7841, Madison, WI 53707-7841
125 South Webster Street, Madison, WI 53702 (608) 266-3390/(608) 267-2427 TDD

John T. Benson
State Superintendent

Robert H. Gomoll
Deputy State Superintendent

Monday, January 10, 1994

Alan Gilbertson
UW Stout
218 Applied Arts Building
Menomonie, WI 54751

I have reviewed and approved your application for the following programs:

Applied/Integrated Curriculum Workshop. This program is approved for 12 equivalency clock hours. The DPI approval number is 94-101.

The verification form, PI-1681, should be validated by the participant and signed by you at the conclusion of the workshop. The form is then returned to the participants who will enclose it with their application for renewal of the file year license.

The agency verification form, PI-1682, should be completed by you and returned to this office as soon as possible upon completion of the workshop.

Sincerely,

James M. Wall, Coordinator
Equivalency Clock Hour Program

gg

Enclosures

Conference/Workshop/Seminar

PI-1680-w

Attach This Information For Each Program Submitted

Program Title
Applied/Integrated Curriculum Workshop

Common Theme Provide assistance to secondary vocational and academic teachers who will be responsible for initial development, implementation and assessment of the grade levels 11-14 applied/integrated curricula in WI

Number of Clock Hours Requested 12	Number of Clock Hours Granted	License Target Group for Whom Programs was Developed Secondary Vocational Teachers/Postsecondary Voc. Teachers Secondary Academic Teachers/Postsecondary Academic Teachers

Goals and Objectives: Attach Additional Pages as Necessary

1. Familiarize teams of educators with Wisconsin's model for integrated curriculum.
2. Facilitate group work/team building strategies.
3. Identify authentic tasks that are contextualized within and across disciplines.
4. Sequence authentic tasks into a format that can be taught in local school environment.
5. Develop implementation and assessment strategies for applied/integrated curricula at local schools.

Program Schedule: Attach Additional Pages as Necessary

See attached agenda.

Qualifications of person(s) conducting the program:

The Center for Vocational, Technical and Adult Education staff coordinate the workshop. Center staff and additional university teaching staff will serve as facilitators for small group activities. The presenters for the workshops are John Fortier and Jim Moser of the Wisconsin Dept. of Public Instruction who have had considerable experience in this area and have developed a paper on applied/integrated curriculum which serves as the basis for the Wisconsin Model.

I am willing to have this program listed in a statewide dissemination system.
☒ Yes ☐ No

FOR DPI USE DPI Approval Signature	Date	**DPI Approval Number**

⑦

Applied/Integrated Curriculum Workshop

February 15-16, 1994 **Sheraton Inn-Madison, WI**

February 14, 1994	**Pre-Conference Workshop**
6:30 p.m.- 8:00 p.m.	Meet in Restaurant for Dinner. Discuss role of facilitator during the two-day workshop while at dinner.
8:00 p.m. - 9:30 p.m.	Adjourn from dinner to the main conference room. Pre-conference preview of room set-up and locations for the facilitators. Set out materials required of the facilitators. Preview the conference folder packets.

Applied/Integrated Curriculum Workshop

February 15-16, 1994 **Sheraton Inn, Madison, WI**

February 15 **Tuesday**

7:00 - 8:30 a.m. **Registration /Continental Breakfast** (provided by conference)

8:45 a.m. **Welcome and Introductions** (Mike Galloy, UW-Stout)

- Introduction of Guests and Facilitators
- Overview of Project
- Intent of Workshop
- Expenses paid by project

"Wisconsin Learner Goals, Outcomes, Assessment" (Sue Grady, DPI)

- Educating students for success in the 21st Century

Target and Tasks (John Fortier and James Moser, DPI)

- Learner Outcomes
- Educational Targets
- Authentic Tasks and Enablers

Break -Coffee, Tea, Juice provided.

Group Activity 1: Authentic Task Development

- Grouped by Discipline in Groups of 4-5
- Determine Enablers that relate to the Outcomes

12:00 **LUNCH** (provided by conference)

1:15 p.m. **Recap Group Activity 1**

Group Activity 2: Authentic Task Development

- Work in Home Teams
- Use enablers identified in Activity 1 to develop integrated tasks
- Focus on Specific Outcome

Break-Coffee, Tea, Soda available.

Recap of Day's Activities

4:15 p.m. **Adjourn**

5:45 p.m. **Banquet**

Conversations Over Dessert: "Linking School-to-Work Transition with Other Epochal Changes" (Kathleen Paris, Director, Leadership Institute for School to Work Transition, Center on Education and Work, UW-Madison)

February 16	Wednesday
7:00 - 8:30 a.m.	**Continental Breakfast** (provided by conference)
8:30 a.m.	**Group Activity 2 Continues**
	Recap of Group Activity 2
	Group Activity 3: Authentic Task Development •Work in Home Teams •Assessment •Focus on Reality/Authenticity •Develop Implementation Procedures
	Break -Groups should continue with activity during break period. Coffee, Tea, Juice provided.
	Group Activity 3 Continues
12:00	**LUNCH** (provided by conference)
1:00 p.m.	**Group Activity 3 Continues** •Integrate Action Plans •Follow-up Activities
	Break -Groups should continue with activity during break period. Coffee, Tea, Soda provided.
	Recap Group Activity 3
3:00 p.m.	**Summary** •Assignments •June Workshop •Small Grant Application •Travel Expense Forms •Evaluation Form

NOTE: Travel Expense Forms must be completed and turned in prior to departure. If you must depart prior to the end of the conference, please contact Alan Gilbertson so the forms can be completed and checked for accuracy.

⑧

Evaluation

Applied/Integrated Curricula Workshop

Madison Sheraton Inn
February 15 and 16, 1994

1. Check the following which most accurately describes your primary place of employment (check one):
   1._____DPI
   2._____Secondary School System
   3._____University System
   4._____VTAE College
   5._____WBVTAE
   6._____Other

2. Check the area that most accurately describes your position:
   1._____Academic Teacher
   2._____Curriculum Coordinator
   3._____District Administrator/Superintendent
   4._____General Education Instructor
   5._____Guidance
   6._____LVEC/Tech Prep Coordinator
   7._____Principal/Assistant Principal
   8._____Special Needs
   9._____Vocational Teacher
   10._____Other

General Session Evaluation

Please comment on the usefulness of the information/activity for your school's applied/integrated curricula. For each of the items, circle the number that corresponds to the usefulness of the session for you. Feel free to make additional comments.

5 - Extremely Useful (EU)
4 - Useful
3 - Unsure (?)
2 - Not Useful
1 - Definitely Not Useful (DNU)

Tuesday, February 15 EU 4 ? 2 DNU

3. Targets and Tasks--John Fortier and Jim Moser 5 4 3 2 1
Comments____
____
____

4. Group 1 Activity--Authentic Task Development by Discipline 5 4 3 2 1
Comments____
____
____

5. Wisconsin Learner Goals, Outcomes, Assessments (Sue Grady) 5 4 3 2 1
Comments____
____
____

EU 4 ? 2 DNU

6. Group 2 Activity--Developing Authentic Tasks by Home Teams 5 4 3 2 1
Comments

Wednesday, February 16

7. Group 3 Activity--Authentic Task Development by Home Teams 5 4 3 2 1
Comments

Overall Applied/Integrated Curricula Workshop

8. Facility comments (meals, breaks, sleeping rooms, conference rooms, temperature, hotel staff, etc.) 5 4 3 2 1
Comments

9. Overall, how would you rate the Applied/Integrated Curricula Workshop? 5 4 3 2 1

10. What did you come away with as a result of your participation in this workshop?

11. Any other comments

Thank you for taking the time to complete this!
Please Return Survey to Facilitators or Drop in Box at Registration Table.

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DISAP, Version 2.0,  VAX-11 BASIC. Program: DES101                  Page: 1
Center for Vocational Technical and Adult Education
Group number based on question  1  for this analysis
Analysis on 07-Feb-94 at 08:37 AM.  Data from file: STEVENSPOINTEVAL_94
Survey analysis of response to 12 questions, by 178 people
============
Question: 1   DESCRIBE YOUR PRIMARY PLACE OF EMPLOYMENT
TOTAL GROUP
 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit     Omit   No Omit     People  Checks  First  Median  Third  IQR
   0    2.53    2.55      1.18     1.15       178     178    1.82   2.14   2.46   0.64

 Omit    1    2    3    4    5    6
 0.01 0.00 0.78 0.02 0.13 0.00 0.07 People
    1    0  139    3   23    0   12
SECONDARY SCHOOL SYSTEM
 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit     Omit   No Omit     People  Checks  First  Median  Third  IQR
   2    2.00    2.00      0.00     0.00       139     139    1.75   2.00   2.25   0.50

 Omit    1    2
 0.00 0.00 1.00 People
    0    0  139
UNIVERSITY SYSTEM
 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit     Omit   No Omit     People  Checks  First  Median  Third  IQR
   3    3.00    3.00      0.00     0.00         3       3    2.75   3.00   3.25   0.50

 Omit    1    2    3
 0.00 0.00 0.00 1.00 People
    0    0    0    3
VTAE COLLEGE
 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit     Omit   No Omit     People  Checks  First  Median  Third  IQR
   4    4.00    4.00      0.00     0.00        23      23    3.75   4.00   4.25   0.50

 Omit    1    2    3    4
 0.00 0.00 0.00 0.00 1.00 People
    0    0    0    0   23

 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit     Omit   No Omit     People  Checks  First  Median  Third  IQR
   6    6.00    6.00      0.00     0.00        12      12    5.75   6.00   6.25   0.50
OTHER
 Omit    1    2    3    4    5    6
 0.00 0.00 0.00 0.00 0.00 0.00 1.00 People
    0    0    0    0    0    0   12

============
Question: 2    AREA THAT MOST ACCURATELY DESCRIBES YOUR POSITION.
TOTAL GROUP
 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit     Omit   No Omit     People  Checks  First  Median  Third  IQR
   0    4.27    4.47      3.69     3.44       178     178    1.13   3.83   8.46   7.34

 Omit    1    2    3    4    5    6    7    8    9
 0.04 0.38 0.08 0.01 0.03 0.04 0.08 0.02 0.08 0.24 People
    8   68   14    1    6    7   14    4   14   42
```

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DISAP, Version 2.0,  VAX-11 BASIC. Program: DES101                 Page: 2
Center for Vocational Technical and Adult Education
Group number based on question  1  for this analysis
Analysis on 07-Feb-94 at 08:37 AM.  Data from file: STEVENSPOINTEVAL_94
Survey analysis of response to 12 questions, by 178 people
=============
Question: 2
  Continued
=============
 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
       Omit  No Omit     Omit   No Omit   People  Checks First Median Third IQR
   2    4.27   4.40     3.67     3.52      139     139   1.07  2.44   8.54  7.46

 Omit    1    2    3    4    5    6    7    8    9
 0.03 0.42 0.06 0.01 0.01 0.05 0.06 0.03 0.07 0.25 People
    4   59    9    1    2    7    8    4   10   35

 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
       Omit  No Omit     Omit   No Omit   People  Checks First Median Third IQR
   3    0.33   1.00     0.00     0.00        3       3   0.75  1.00   1.25  0.50

 Omit    1
 0.67 0.33 People
    2    1

 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
       Omit  No Omit     Omit   No Omit   People  Checks First Median Third IQR
   4    4.78   5.00     3.66     3.34       23      23   1.67  4.25   8.71  7.05

 Omit    1    2    3    4    5    6    7    8    9
 0.04 0.22 0.13 0.00 0.17 0.00 0.09 0.00 0.04 0.30 People
    1    5    3    0    4    0    2    0    1    7

 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
       Omit  No Omit     Omit   No Omit   People  Checks First Median Third IQR
   6    4.58   4.58     2.94     2.94       12      12   1.50  5.75   6.50  5.00

 Omit    1    2    3    4    5    6    7    8
 0.00 0.25 0.17 0.00 0.00 0.00 0.33 0.00 0.25 People
    0    3    2    0    0    0    4    0    3

============
Question: 3   PUTTING THE PIECES TOGETHER.
============
 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
       Omit  No Omit     Omit   No Omit   People  Checks First Median Third IQR
   0    3.11   3.17     1.18     1.02      178     178   2.51  3.28   3.98  1.47

 Omit    1    2    3    4    5
 0.02 0.07 0.17 0.32 0.37 0.06 People
    3   13   30   57   65   10

 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
       Omit  No Omit     Omit   No Omit   People  Checks First Median Third IQR
   2    3.09   3.14     1.18     1.05      139     139   2.47  3.26   3.97  1.51

 Omit    1    2    3    4    5
 0.01 0.09 0.17 0.32 0.36 0.06 People
    2   12   23   44   50    8
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DISAP, Version 2.0,  VAX-11 BASIC. Program: DES101                 Page: 3
Center for Vocational Technical and Adult Education
Group number based on question  1  for this analysis
Analysis on 07-Feb-94 at 08:37 AM.  Data from file: STEVENSPOINTEVAL_94
Survey analysis of response to 12 questions, by 178 people
=============
Question: 3
  Continued
=============
 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit    Omit   No Omit   People  Checks First Median Third IQR
   3     3.67   3.67     0.58     0.58       3       3   3.25  3.75   4.13  0.88

 Omit    1    2    3    4
 0.00 0.00 0.00 0.33 0.67 People
    0    0    0    1    2

 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit    Omit   No Omit   People  Checks First Median Third IQR
   4     3.30   3.30     1.02     1.02      23      23   2.61  3.43   4.08  1.48

 Omit    1    2    3    4    5
 0.00 0.04 0.17 0.30 0.39 0.09 People
    0    1    4    7    9    2

 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit    Omit   No Omit   People  Checks First Median Third IQR
   6     2.75   3.00     1.48     0.77      12      12   2.42  3.00   3.58  1.17

 Omit    1    2    3    4
 0.08 0.00 0.25 0.42 0.25 People
    1    0    3    5    3

============
Question: 4    TARGETS AND TASKS.
============
 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit    Omit   No Omit   People  Checks First Median Third IQR
   0     3.57   3.61     1.15     1.01     178     178   2.95  3.80   4.31  1.36

 Omit    1    2    3    4    5
 0.01 0.03 0.13 0.19 0.48 0.16 People
    2    6   23   33   86   28

 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit    Omit   No Omit   People  Checks First Median Third IQR
   2     3.57   3.62     1.21     1.04     139     139   2.93  3.81   4.35  1.42

 Omit    1    2    3    4    5
 0.01 0.04 0.13 0.19 0.45 0.18 People
    2    5   18   26   63   25

 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit    Omit   No Omit   People  Checks First Median Third IQR
   3     3.67   3.67     0.58     0.58       3       3   3.25  3.75   4.13  0.88

 Omit    1    2    3    4
 0.00 0.00 0.00 0.33 0.67 People
    0    0    0    1    2
```

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=============
Question: 4
  Continued
=============
 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit     Omit   No Omit    People  Checks First Median Third IQR
   4    3.65   3.65      0.93     0.93       23      23    3.42  3.87   4.25  0.83

 Omit    1    2    3    4    5
 0.00 0.04 0.09 0.13 0.65 0.09 People
   0    1    2    3   15    2

 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit     Omit   No Omit    People  Checks First Median Third IQR
   6    3.50   3.50      0.90     0.90       12      12    2.83  3.67   4.17  1.33

 Omit    1    2    3    4    5
 0.00 0.00 0.17 0.25 0.50 0.08 People
   0    0    2    3    6    1

============
Question: 5   GROUP ONE ACTIVITY.
============
 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit     Omit   No Omit    People  Checks First Median Third IQR
   0    3.67   3.69      1.12     1.05      178     178    3.07  3.86   4.41  1.34

 Omit    1    2    3    4    5
 0.01 0.05 0.08 0.21 0.45 0.21 People
   1    9   14   37   80   37

 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit     Omit   No Omit    People  Checks First Median Third IQR
   2    3.76   3.79      1.12     1.03      139     139    3.31  3.95   4.46  1.15

 Omit    1    2    3    4    5
 0.01 0.05 0.06 0.17 0.48 0.23 People
   1    7    8   24   67   32

 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit     Omit   No Omit    People  Checks First Median Third IQR
   3    2.33   2.33      0.58     0.58        3       3    1.88  2.25   2.75  0.88

 Omit    1    2    3
 0.00 0.00 0.67 0.33 People
   0    0    2    1

 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit     Omit   No Omit    People  Checks First Median Third IQR
   4    3.35   3.35      1.15     1.15       23      23    2.63  3.56   4.19  1.57

 Omit    1    2    3    4    5
 0.00 0.09 0.13 0.26 0.39 0.13 People
   0    2    3    6    9    3
```

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============
Question: 5
  Continued
============
 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit    Omit   No Omit   People  Checks First Median Third IQR
   6    3.42   3.42      0.79     0.79      12      12   2.83  3.33   4.00  1.17

 Omit    1    2    3    4    5
 0.00 0.00 0.08 0.50 0.33 0.08 People
    0    0    1    6    4    1

============
Question: 6   GROUP TWO ACTIVITY.
============
 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit    Omit   No Omit   People  Checks First Median Third IQR
   0    3.69   3.80      1.36     1.03     178     178   3.19  3.95   4.54  1.35

 Omit    1    2    3    4    5
 0.03 0.03 0.10 0.17 0.42 0.25 People
    5    5   17   31   75   45

 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit    Omit   No Omit   People  Checks First Median Third IQR
   2    3.80   3.91      1.38     1.01     139     139   3.36  4.04   4.70  1.33

 Omit    1    2    3    4    5
 0.03 0.03 0.06 0.17 0.40 0.30 People
    4    4    9   24   56   42

 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit    Omit   No Omit   People  Checks First Median Third IQR
   3    2.33   2.33      0.58     0.58       3       3   1.88  2.25   2.75  0.88

 Omit    1    2    3
 0.00 0.00 0.67 0.33 People
    0    0    2    1

 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit    Omit   No Omit   People  Checks First Median Third IQR
   4    3.26   3.41      1.43     1.01      23      23   2.42  3.68   4.18  1.77

 Omit    1    2    3    4    5
 0.04 0.00 0.26 0.13 0.48 0.09 People
    1    0    6    3   11    2

 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit    Omit   No Omit   People  Checks First Median Third IQR
   6    3.58   3.58      1.00     1.00      12      12   3.17  3.79   4.21  1.05

 Omit    1    2    3    4    5
 0.00 0.08 0.00 0.25 0.58 0.08 People
    0    1    0    3    7    1
```

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Center for Vocational Technical and Adult Education
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Survey analysis of response to 12 questions, by 178 people
============
Question: 7    DINNER SPEAKER.
============
 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit     Omit    No Omit   People  Checks First Median Third IQR
   0     2.99   3.86      2.61      0.91     178     178   3.17  3.90   4.59  1.42

 Omit    1    2    3    4    5
 0.22 0.01 0.03 0.23 0.29 0.21 People
   40    2    5   41   52   38

 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit     Omit    No Omit   People  Checks First Median Third IQR
   2     2.85   3.77      2.63      0.88     139     139   3.07  3.77   4.44  1.37

 Omit    1    2    3    4    5
 0.24 0.01 0.03 0.27 0.28 0.17 People
   34    1    4   37   39   24

 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit     Omit    No Omit   People  Checks First Median Third IQR
   3     3.00   4.50      4.80      0.71       3       3   4.00  4.50   5.00  1.00

 Omit    1    2    3    4    5
 0.33 0.00 0.00 0.00 0.33 0.33 People
    1    0    0    0    1    1

 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit     Omit    No Omit   People  Checks First Median Third IQR
   4     3.52   4.26      2.62      0.87      23      23   3.75  4.43   4.97  1.22

 Omit    1    2    3    4    5
 0.17 0.00 0.04 0.09 0.30 0.39 People
    4    0    1    2    7    9

 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit     Omit    No Omit   People  Checks First Median Third IQR
   6     3.50   3.82      1.98      1.17      12      12   3.38  4.00   4.58  1.21

 Omit    1    2    3    4    5
 0.08 0.08 0.00 0.17 0.42 0.25 People
    1    1    0    2    5    3

============
Question: 8    GROUP THREE ACTIVITY.
============
 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit     Omit    No Omit   People  Checks First Median Third IQR
   0     2.27   3.21      2.60      1.25     178     178   2.34  3.41   4.18  1.83

 Omit    1    2    3    4    5
 0.29 0.10 0.09 0.18 0.24 0.10 People
   52   18   16   32   42   18
```

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Center for Vocational Technical and Adult Education
Group number based on question  1  for this analysis
Analysis on 07-Feb-94 at 08:37 AM.  Data from file: STEVENSPOINTEVAL_94
Survey analysis of response to 12 questions, by 178 people
=============
Question: 8
  Continued
=============
 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit    Omit   No Omit   People  Checks First Median Third IQR
   2    2.35   3.27      2.60    1.25      139     139   2.42  3.50   4.24  1.81

 Omit    1    2    3    4    5
 0.28 0.09 0.09 0.17 0.24 0.12 People
   39   13   13   24   34   16

 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit    Omit   No Omit   People  Checks First Median Third IQR
   3    1.00   3.00      0.00    0.00        3       3   2.75  3.00   3.25  0.50

 Omit    1    2    3
 0.67 0.00 0.00 0.33 People
    2    0    0    1

 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit    Omit   No Omit   People  Checks First Median Third IQR
   4    1.78   2.56      2.22    1.15       23      23   1.50  2.70   3.50  2.00

 Omit    1    2    3    4
 0.30 0.17 0.13 0.22 0.17 People
    7    4    3    5    4

 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit    Omit   No Omit   People  Checks First Median Third IQR
   6    2.50   3.75      3.25    1.28       12      12   3.50  4.00   4.50  1.00

 Omit    1    2    3    4    5
 0.33 0.08 0.00 0.08 0.33 0.17 People
    4    1    0    1    4    2

============
Question: 9   GROUP FOUR ACTIVITY.
============
 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit    Omit   No Omit   People  Checks First Median Third IQR
   0    3.05   4.08      2.90    0.99      178     178   3.58  4.24   4.87  1.29

 Omit    1    2    3    4    5
 0.25 0.02 0.03 0.11 0.29 0.30 People
   45    4    5   20   51   53

 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit    Omit   No Omit   People  Checks First Median Third IQR
   2    3.32   4.19      2.74    0.94      139     139   3.70  4.36   4.94  1.24

 Omit    1    2    3    4    5
 0.21 0.02 0.02 0.09 0.30 0.35 People
   29    3    3   13   42   49
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Center for Vocational Technical and Adult Education
Group number based on question  1  for this analysis
Analysis on 07-Feb-94 at 08:37 AM.  Data from file: STEVENSPOINTEVAL_94
Survey analysis of response to 12 questions, by 178 people
============
Question: 9
  Continued
============
 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit    Omit   No Omit   People  Checks First Median Third IQR
   3    1.00   3.00      0.00     0.00       3       3   2.75  3.00   3.25  0.50

 Omit    1    2    3
 0.67 0.00 0.00 0.33 People
    2    0    0    1

 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit    Omit   No Omit   People  Checks First Median Third IQR
   4    2.09   3.43      3.05     1.16      23      23   2.67  3.67   4.25  1.58

 Omit    1    2    3    4    5
 0.39 0.04 0.09 0.13 0.26 0.09 People
    9    1    2    3    6    2

 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit    Omit   No Omit   People  Checks First Median Third IQR
   6    2.17   3.71      3.35     0.76      12      12   3.08  3.67   4.25  1.17

 Omit    1    2    3    4    5
 0.42 0.00 0.00 0.25 0.25 0.08 People
    5    0    0    3    3    1

============
Question: 10   FACILITY COMMENTS.
============
 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit    Omit   No Omit   People  Checks First Median Third IQR
   0    3.62   4.05      2.03     0.89     178     178   3.53  4.14   4.79  1.26

 Omit    1    2    3    4    5
 0.11 0.01 0.04 0.16 0.37 0.31 People
   19    1    8   29   65   56

 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit    Omit   No Omit   People  Checks First Median Third IQR
   2    3.78   4.08      1.76     0.88     139     139   3.58  4.16   4.80  1.22

 Omit    1    2    3    4    5
 0.07 0.01 0.04 0.15 0.40 0.33 People
   10    1    6   21   55   46

 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit    Omit   No Omit   People  Checks First Median Third IQR
   3    2.67   4.00      4.22     0.00       3       3   3.75  4.00   4.25  0.50

 Omit    1    2    3    4
 0.33 0.00 0.00 0.00 0.67 People
    1    0    0    0    2
```

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=============
Question: 10
  Continued
=============
 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit     Omit   No Omit    People  Checks First Median Third IQR
   4     2.70   3.88      3.05     1.02       23      23   3.00  3.83   4.83  1.83

 Omit    1    2    3    4    5
 0.30 0.00 0.04 0.26 0.13 0.26 People
    7    0    1    6    3    6

 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit     Omit   No Omit    People  Checks First Median Third IQR
   6     3.67   4.00      1.95     1.00       12      12   3.38  4.13   4.81  1.44

 Omit    1    2    3    4    5
 0.08 0.00 0.08 0.17 0.33 0.33 People
    1    0    1    2    4    4

============
Question: 11  OVERALL RATING.
============
 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit     Omit   No Omit    People  Checks First Median Third IQR
   0     3.02   3.38      1.84     1.04      178     178   2.73  3.55   4.16  1.43

 Omit    1    2    3    4    5
 0.11 0.06 0.11 0.26 0.37 0.10 People
   19   10   19   47   66   17

 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit     Omit   No Omit    People  Checks First Median Third IQR
   2     3.11   3.43      1.80     1.07      139     139   2.77  3.64   4.21  1.44

 Omit    1    2    3    4    5
 0.09 0.06 0.10 0.23 0.40 0.11 People
   13    9   14   32   56   15

 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit     Omit   No Omit    People  Checks First Median Third IQR
   3     3.33   3.33      0.58     0.58        3       3   2.88  3.25   3.75  0.88

 Omit    1    2    3    4
 0.00 0.00 0.00 0.67 0.33 People
    0    0    0    2    1

 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit     Omit   No Omit    People  Checks First Median Third IQR
   4     2.52   3.22      2.22     0.81       23      23   2.67  3.17   3.80  1.13

 Omit    1    2    3    4    5
 0.22 0.00 0.13 0.39 0.22 0.04 People
    5    0    3    9    5    1
```

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Center for Vocational Technical and Adult Education
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Survey analysis of response to 12 questions, by 178 people
=============
Question: 11
  Continued
=============
 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit    Omit   No Omit   People  Checks First Median Third IQR
   6     2.92   3.18     1.77     1.17      12      12   2.38  3.33   4.06  1.69

 Omit    1    2    3    4    5
 0.08 0.08 0.17 0.25 0.33 0.08 People
    1    1    2    3    4    1

============
Question: 12  OTHER COMMENTS.
============
 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit    Omit   No Omit   People  Checks First Median Third IQR
   0     0.71   1.00     0.70     0.00     178     178   0.75  1.00   1.25  0.50

 Omit    1
 0.29 0.71 People
   51  127

 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit    Omit   No Omit   People  Checks First Median Third IQR
   2     0.71   1.00     0.71     0.00     139     139   0.75  1.00   1.25  0.50

 Omit    1
 0.29 0.71 People
   40   99

 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit    Omit   No Omit   People  Checks First Median Third IQR
   3     1.00   1.00     0.00     0.00       3       3   0.75  1.00   1.25  0.50

 Omit    1
 0.00 1.00 People
    0    3

 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit    Omit   No Omit   People  Checks First Median Third IQR
   4     0.74   1.00     0.69     0.00      23      23   0.75  1.00   1.25  0.50

 Omit    1
 0.26 0.74 People
    6   17

 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit    Omit   No Omit   People  Checks First Median Third IQR
   6     0.58   1.00     0.88     0.00      12      12   0.75  1.00   1.25  0.50

 Omit    1
 0.42 0.58 People
    5    7
```

```
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Center for Vocational Technical and Adult Education
Group number based on question  1  for this analysis
Analysis on 16-Feb-94 at 03:52 PM.  Data from file: MADISONEVAL_94
Survey analysis of response to 11 questions, by 162 people
============
Question: 1   Describe your primary place of employment.
============
 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit     Omit    No Omit   People  Checks First Median Third IQR
   0    2.40   2.41       0.99      0.95     162     162   1.80  2.11   2.41  0.61

 Omit    1    2    3    4    5    6
 0.01 0.00 0.82 0.00 0.14 0.00 0.03 People      TOTAL GROUP
    1    0  133    0   23    0    5

 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit     Omit    No Omit   People  Checks First Median Third IQR
   2    2.00   2.00       0.00      0.00     133     133   1.75  2.00   2.25  0.50

 Omit    1    2
 0.00 0.00 1.00 People                       SECONDARY SCHOOL SYSTEM
    0    0  133

 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit     Omit    No Omit   People  Checks First Median Third IQR
   4    4.00   4.00       0.00      0.00      23      23   3.75  4.00   4.25  0.50

 Omit    1    2    3    4
 0.00 0.00 0.00 0.00 1.00 People             TECHNICAL COLLEGE SYSTEM
    0    0    0    0   23

 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit     Omit    No Omit   People  Checks First Median Third IQR
   6    6.00   6.00       0.00      0.00       5       5   5.75  6.00   6.25  0.50

 Omit    1    2    3    4    5    6
 0.00 0.00 0.00 0.00 0.00 0.00 1.00 People      OTHER
    0    0    0    0    0    0    5

============
Question: 2   Describe your position.
============
 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit     Omit    No Omit   People  Checks First Median Third IQR
   0    4.54   4.57       3.55      3.51     162     162   1.09  4.08   8.63  7.53

 Omit    1    2    3    4    5    6    7    8    9
 0.01 0.42 0.04 0.01 0.04 0.01 0.10 0.06 0.03 0.28 People
    1   68    7    2    6    1   17    9    5   46

 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit     Omit    No Omit   People  Checks First Median Third IQR
   2    4.51   4.55       3.68      3.64     133     133   1.04  2.50   8.70  7.65

 Omit    1    2    3    4    5    6    7    8    9
 0.01 0.46 0.04 0.01 0.01 0.01 0.08 0.06 0.03 0.31 People
    1   61    5    1    1    1   10    8    4   41
```

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=============
Question: 2
  Continued
=============
 Group ---- Mean ----   --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit     Omit   No Omit   People  Checks First Median Third IQR
   4     4.74   4.74      2.97     2.97       23      23  1.46  4.40   6.38  4.92

 Omit    1    2    3    4    5    6    7    8    9
 0.00 0.26 0.04 0.00 0.22 0.00 0.26 0.00 0.00 0.22 People
    0    6    1    0    5    0    6    0    0    5

 Group ---- Mean ----   --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit     Omit   No Omit   People  Checks First Median Third IQR
   6     5.00   5.00      2.92     2.92        5       5  2.75  6.00   7.25  4.50

 Omit    1    2    3    4    5    6    7    8
 0.00 0.20 0.00 0.20 0.00 0.00 0.20 0.20 0.20 People
    0    1    0    1    0    0    1    1    1

=============
Question: 3       TARGETS  AND TASKS
=============
 Group ---- Mean ----   --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit     Omit   No Omit   People  Checks First Median Third IQR
   0     3.70   3.72      0.94     0.85      162     162  3.19  3.83   4.30  1.11

 Omit    1    2    3    4    5
 0.01 0.01 0.07 0.23 0.53 0.14 People
    1    2   12   38   86   23

 Group ---- Mean ----   --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit     Omit   No Omit   People  Checks First Median Third IQR
   2     3.82   3.82      0.81     0.81      133     133  3.40  3.91   4.35  0.95

 Omit    1    2    3    4    5
 0.00 0.01 0.06 0.20 0.56 0.17 People
    0    1    8   27   75   22

 Group ---- Mean ----   --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit     Omit   No Omit   People  Checks First Median Third IQR
   4     3.04   3.18      1.28     0.85       23      23  2.67  3.28   3.89  1.22

 Omit    1    2    3    4
 0.04 0.04 0.13 0.39 0.39 People
    1    1    3    9    9

 Group ---- Mean ----   --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit     Omit   No Omit   People  Checks First Median Third IQR
   6     3.40   3.40      1.14     1.14        5       5  2.63  3.25   4.25  1.63

 Omit    1    2    3    4    5
 0.00 0.00 0.20 0.40 0.20 0.20 People
    0    0    1    2    1    1
```

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============
Question: 4      GROUP I ACTIVITY
============
 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit    Omit   No Omit   People  Checks First Median Third IQR
   0     3.84   3.89     1.11     0.93      162     162  3.50  4.00   4.50  1.00

 Omit    1    2    3    4    5
 0.01 0.02 0.07 0.15 0.49 0.25 People
    2    3   12   25   80   40

 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit    Omit   No Omit   People  Checks First Median Third IQR
   2     3.94   3.97     1.04     0.92      133     133  3.56  4.07   4.63  1.07

 Omit    1    2    3    4    5
 0.01 0.02 0.07 0.14 0.49 0.29 People
    1    2    9   18   65   38

 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit    Omit   No Omit   People  Checks First Median Third IQR
   4     3.22   3.36     1.38     0.95       23      23  2.75  3.59   4.09  1.34

 Omit    1    2    3    4    5
 0.04 0.04 0.13 0.26 0.48 0.04 People
    1    1    3    6   11    1

 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit    Omit   No Omit   People  Checks First Median Third IQR
   6     4.00   4.00     0.71     0.71        5       5  3.58  4.00   4.42  0.83

 Omit    1    2    3    4    5
 0.00 0.00 0.00 0.20 0.60 0.20 People
    0    0    0    1    3    1

============
Question: 5      WI  LEARNER GOALS, OUTCOMES, ASSESSMENTS
============
 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit    Omit   No Omit   People  Checks First Median Third IQR
   0     3.63   3.72     1.19     0.86      162     162  3.11  3.79   4.33  1.22

 Omit    1    2    3    4    5
 0.02 0.01 0.06 0.29 0.45 0.17 People
    4    2    9   47   73   27

 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit    Omit   No Omit   People  Checks First Median Third IQR
   2     3.70   3.78     1.17     0.85      133     133  3.22  3.86   4.37  1.15

 Omit    1    2    3    4    5
 0.02 0.02 0.05 0.26 0.48 0.18 People
    3    2    6   34   64   24
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=============
Question: 5
  Continued
=============
 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit     Omit   No Omit  People  Checks First Median Third IQR
   4     3.30    3.45     1.34      0.86      23      23   2.82  3.32   4.08 1.27

 Omit    1    2    3    4    5
 0.04 0.00 0.09 0.48 0.26 0.13 People
    1    0    2   11    6    3

 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit     Omit   No Omit  People  Checks First Median Third IQR
   6     3.20    3.20     0.84      0.84       5       5   2.63  3.25   3.88 1.25

 Omit    1    2    3    4
 0.00 0.00 0.20 0.40 0.40 People
    0    0    1    2    2

============
Question: 6     GROUP 2 ACTIVITY
============
 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit     Omit   No Omit  People  Checks First Median Third IQR
   0     4.06    4.19     1.34      0.85     162     162   3.69  4.29   4.90 1.21

 Omit    1    2    3    4    5
 0.03 0.01 0.04 0.12 0.40 0.40 People
    5    1    6   20   65   65

 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit     Omit   No Omit  People  Checks First Median Third IQR
   2     4.14    4.26     1.31      0.80     133     133   3.75  4.36   4.93 1.18

 Omit    1    2    3    4    5
 0.03 0.01 0.02 0.12 0.40 0.43 People
    4    1    2   16   53   57

 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit     Omit   No Omit  People  Checks First Median Third IQR
   4     3.61    3.77     1.58      1.11      23      23   2.88  3.93   4.71 1.84

 Omit    1    2    3    4    5
 0.04 0.00 0.17 0.17 0.30 0.30 People
    1    0    4    4    7    7

 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit     Omit   No Omit  People  Checks First Median Third IQR
   6     4.20    4.20     0.45      0.45       5       5   3.81  4.13   4.44 0.63

 Omit    1    2    3    4    5
 0.00 0.00 0.00 0.00 0.80 0.20 People
    0    0    0    0    4    1
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============
Question: 7       GROUP 3 ACTIVITY
============
 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit     Omit   No Omit  People  Checks First Median Third IQR
   0     3.89   3.96      1.24     0.97     162     162   3.38  4.09   4.76  1.38

 Omit    1    2    3    4    5
 0.02 0.01 0.09 0.17 0.38 0.33 People
    3    1   15   27   62   54

 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit     Omit   No Omit  People  Checks First Median Third IQR
   2     3.99   4.05      1.15     0.91     133     133   3.49  4.16   4.83  1.34

 Omit    1    2    3    4    5
 0.02 0.00 0.07 0.18 0.37 0.37 People
    2    0    9   24   49   49

 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit     Omit   No Omit  People  Checks First Median Third IQR
   4     3.57   3.57      1.20     1.20      23      23   2.45  3.85   4.43  1.98

 Omit    1    2    3    4    5
 0.00 0.04 0.22 0.09 0.43 0.22 People
    0    1    5    2   10    5

 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit     Omit   No Omit  People  Checks First Median Third IQR
   6     3.40   3.40      0.89     0.89       5       5   2.75  3.67   4.08  1.33

 Omit    1    2    3    4
 0.00 0.00 0.20 0.20 0.60 People
    0    0    1    1    3

============
Question: 8      FACILITY COMMENTS
============
 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit     Omit   No Omit  People  Checks First Median Third IQR
   0     3.33   3.67      1.82     0.96     162     162   3.06  3.83   4.33  1.27

 Omit    1    2    3    4    5
 0.09 0.02 0.11 0.17 0.46 0.15 People
   15    3   18   28   74   24

 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit     Omit   No Omit  People  Checks First Median Third IQR
   2     3.35   3.68      1.82     0.99     133     133   3.05  3.84   4.36  1.31

 Omit    1    2    3    4    5
 0.09 0.02 0.11 0.18 0.44 0.17 People
   12    3   14   24   58   22
```

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============
Question: 8
  Continued
============
 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
       Omit  No Omit     Omit   No Omit   People  Checks First Median Third IQR
   4    3.48   3.64      1.38     0.85      23      23   3.13  3.81   4.23  1.11

 Omit    1    2    3    4    5
 0.04 0.00 0.13 0.17 0.57 0.09 People
    1    0    3    4   13    2

 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
       Omit  No Omit     Omit   No Omit   People  Checks First Median Third IQR
   6    2.80   3.50      2.62     1.00       5       5   2.50  3.83   4.17  1.67

 Omit    1    2    3    4
 0.20 0.00 0.20 0.00 0.60 People
    1    0    1    0    3

============
Question: 9     OVERALL RATING FOR WORKSHOP
============
 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
       Omit  No Omit     Omit   No Omit   People  Checks First Median Third IQR
   0    3.64   3.69      1.06     0.88     162     162   3.13  3.82   4.30  1.17

 Omit    1    2    3    4    5
 0.01 0.01 0.10 0.22 0.52 0.14 People
    2    2   16   35   84   23

 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
       Omit  No Omit     Omit   No Omit   People  Checks First Median Third IQR
   2    3.75   3.81      1.04     0.80     133     133   3.34  3.90   4.35  1.01

 Omit    1    2    3    4    5
 0.02 0.00 0.08 0.20 0.54 0.17 People
    2    0   10   27   72   22

 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
       Omit  No Omit     Omit   No Omit   People  Checks First Median Third IQR
   4    3.17   3.17      1.11     1.11      23      23   2.25  3.55   4.07  1.82

 Omit    1    2    3    4    5
 0.00 0.09 0.22 0.17 0.48 0.04 People
    0    2    5    4   11    1

 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
       Omit  No Omit     Omit   No Omit   People  Checks First Median Third IQR
   6    2.80   2.80      0.45     0.45       5       5   2.56  2.88   3.19  0.63

 Omit    1    2    3
 0.00 0.00 0.20 0.80 People
    0    0    1    4
```

```
DISAP, Version 2.0,  VAX-11 BASIC. Program: DES101                    Page: 7
Center for Vocational Technical and Adult Education
Group number based on question  1  for this analysis
Analysis on 16-Feb-94 at 03:52 PM.  Data from file: MADISONEVAL_94
Survey analysis of response to 11 questions, by 162 people
============
Question: 10   WHAT DID YOU COME AWAY WITH (WRITTEN COMMENTS)
============
 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit     Omit   No Omit    People  Checks  First  Median  Third  IQR
   0     0.88   1.00      0.48     0.00      162     162    0.75   1.00    1.25  0.50

 Omit    1
 0.12 0.88 People
   20  142

 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit     Omit   No Omit    People  Checks  First  Median  Third  IQR
   2     0.89   1.00      0.46     0.00      133     133    0.75   1.00    1.25  0.50

 Omit    1
 0.11 0.89 People
   15  118

 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit     Omit   No Omit    People  Checks  First  Median  Third  IQR
   4     0.83   1.00      0.58     0.00       23      23    0.75   1.00    1.25  0.50

 Omit    1
 0.17 0.83 People
    4   19

 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit     Omit   No Omit    People  Checks  First  Median  Third  IQR
   6     1.00   1.00      0.00     0.00        5       5    0.75   1.00    1.25  0.50

 Omit    1
 0.00 1.00 People
    0    5

============
Question: 11   ANY OTHER COMMENTS (WRITTEN COMMENTS)
============
 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit     Omit   No Omit    People  Checks  First  Median  Third  IQR
   0     0.63   1.00      0.78     0.00      162     162    0.75   1.00    1.25  0.50

 Omit    1
 0.37 0.63 People
   60  102

 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit     Omit   No Omit    People  Checks  First  Median  Third  IQR
   2     0.62   1.00      0.79     0.00      133     133    0.75   1.00    1.25  0.50

 Omit    1
 0.38 0.62 People
   50   83
```

```
=============
Question: 11
  Continued
=============
 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit     Omit   No Omit    People  Checks First Median Third IQR
   4     0.65   1.00      0.78     0.00       23      23   0.75  1.00   1.25  0.50

 Omit    1
 0.35 0.65 People
    8   15

 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit     Omit   No Omit    People  Checks First Median Third IQR
   6     0.80   1.00      0.69     0.00        5       5   0.75  1.00   1.25  0.50

 Omit    1
 0.20 0.80 People
    1    4
```

10

Small Grant Process for Applied/Integrated Curriculum Development

Introduction

This document describes the purpose of the small applied/integrated curriculum development grants and the procedures to be used by the local district/consortium to obtain a grant. **The maximum amount of the grant is $500**. There are 60 grants which will be spread across all consortiums.

Purpose

The purpose of the small grants is to encourage local district teams to implement one or more of the task activities developed at the February workshops.

Fundable Activities

The small grant funds may be used to purchase resources needed to implement the task activities. They may be used to fund teacher salaries or to cover the cost of substitutes' wages. The funds may be used to cover travel costs directly associated with implementing a task activity. For example, they could be used to cover the cost of a field trip to a local business or industry. Funds cannot be used to cover educators' travel costs to attend conventions, conferences, etc. Other allowable expenses are reference materials, supplies for learning activities, and duplicating costs.

Application Procedure

School systems or consortiums that want to apply for a small grant, must fill out the attached form and return it to Mike Galloy at Room 148, Communication Technology Building, UW-Stout, Menomonie, WI 54751. **The application must be received at UW-Stout no later than March 5, 1994**. Notification of award or rejection will be sent to applicants on or before March 24, 1994.

Applicants must describe the purpose and objectives of the small grants well as the activities that will be supported with the availability of the small grant funds. A brief description of how the impacts of the funds will be evaluated along with dissemination activities must be included in the application. Finally, a brief description of how the funds will be used must be included in the request.

If any questions arise during the process of developing the request, contact Mike Galloy at (715) 232-2163, or Alan Gilbertson at (715) 232-1382.

Final Report

Each recipient must file a brief final report that describes the activities that were funded and their impact. **The final report will be due at UW-Stout on or before June 6, 1994**. Payment will be sent shortly after the final report has been received at UW-Stout. Be sure to put a cover sheet on your report. List your team members' names, school and city.

Attachment-Application Form
1/10/94

Applied/Integrated Curriculum Development
Small Grant Application

Directions. To apply for an Applied/Integrated Curriculum Development Small Grant, complete this application form and return it to UW-Stout as directed at the bottom of the form. If you need any assistance in completing this form, contact Mike Galloy at (715) 232-2163, or Alan Gilbertson at (715) 232-1382.

A. Applicant Information

1. School: ______________________________ Date: ______________
2. School District: ______________________________
3. School Address: ______________________________
   City: ________________ Zip: ________________
4. Person Preparing Application: ______________________________
5. Phone Number: ________________ Fax Number: ________________
6. Your Technical College District: ______________________________

B. Purpose for the Grant. Give one or two sentences to identify the purpose for which the grant funds will be used.

C. Objectives for the Grant. Identify the major objectives that the grant funds will help you achieve.

D. Activities. Identify the major activities for which the grant funds will be used. NOTE: The grant funds may not cover the total costs of all the activities.

E. Evaluation. Give a brief description of how you will evaluate the impacts of the funds received through this grant.

F. Dissemination Activities. Identify how you will inform other teachers, administrators and school board members in your district about the outcomes of your project.

G. Budget. Identify how you will use the funds you are requesting.

1. Amount of funds requested. (Maximum amount is $500.00) ______________
2. Budget Items. (Identify how the budget funds will be used. Give the application/activity and the amount of funds assigned to it. For example, "Hire substitute teachers for planning-$240."

3. Time Table. Indicate when the project activities will take place. Indicate the general schedule for your activities, such as, March 15-April 10. (Attach to the proposal)

Submit to: Mike Galloy
Room 148 Comm. Tech. Bldg.
Center for Vocational, Technical and Adult Education
School of Industry and Technology
UW-Stout
Menomonie, WI 54751.
Fax Number: (715) 232-1441

Project Director Signature:______________________________ **Date:**____________

(11)

FORMAT FOR FOLLOW UP ACTIVITIES SCHEDULE

Suggested Outline of Activity (2 to 3 hours). Specific structure of the following activities will be dependant on the number of attendees and the facility available. The Technical Assistance Team will coordinate the activities and the Tech Prep Directors will help facilitate the process in their home consortium. Local teachers and administrators who have expertise in the integration process are welcome to join the facilitation team.

I. Review Learner Outcomes.

II. Teachers review integrated activities that have taken place since conference.
  A. What worked--What did not.
  B. Possible solutions to problems.
  C. Review Mini-grant activities.

III. Brainstorm tasks, develop 2 specific tasks that:
  A. Integrate academic skills and concepts into a technical task.
  B. Integrate technical skills and concepts into an academic task.
  C. Focus on realism and are workable in reasonable time.

IV. Develop specific assessment procedures to measure mastery of the above tasks.

V. Brainstorm ideas that might involve others in home schools to become involved in integration.

VI. Overview future activities (15 minutes).

(12)

FORMAT FOR FOLLOW-UP ACTIVITIES SURVEY

Based on evaluations and feedback from the Integrated and Applied Curricula Workshops, the following format for follow up activities is suggested. Please review these suggestions, indicate your preference, and return to Mike Galloy by March 28, 1994 so that your activity can be scheduled.

1. Identify the time schedule that will meet the needs of as many of your consortium team members as possible (2-3 hours).

   _____During school _____After school ______Saturday AM

2. Identify 3 possible dates for an activity to be scheduled in your consortium. Choose dates between March 28 and May 20, 1994 (please prioritize). You will be contacted to establish a specific date.

   1. ________________ 2. ________________
   3. ________________

3 Select an appropriate delivery method for your consortium.

_____Consortium wide _____Specific school
_____Interactive video _____Other (identify)

Tech Prep Coordinator____

Tech Prep Consortium____

Telephone____

Best time to contact____

PLEASE RETURN THIS SURVEY BY MARCH 28, 1994

13

Integrated and Applied Curricula Summer Conference
University of Wisconsin-Stout
June 20-23, 1994

Monday (June 20) Conference meets in Harvey Hall Auditorium

8:00-9:00 **Registration**: Harvey Hall Auditorium
- Participant Conference Packet.
- Enrollment for one credit/payment for segregated fee.

9:00-9:30 **Welcome/Overview of Conference/Goals & Objectives:** Auditorium

- Mike Galloy: Project Director, UW-Stout.
- Gabrielle Wacker: Tech Prep Consultant, WTCS.
- Mary Jane Best Louther: Tech Prep Consultant, DPI.

9:30-10:30 **Keynote Speaker: "Curriculum Change: Innovations, Integration and Application.":** Auditorium

- M. James Bensen: President Dunwoody Institute.

10:30-10:45 **Break** (area outside auditorium)

10:45-11:45 **Team Building Skills**: Auditorium
- **Team Decision Making**
- **Team Building Techniques**
- **Different Leadership Skills and Styles**

- Beth Dailey: Dean of Lakeland Campus and Outreach Education, Nicolet Area Technical College.

11:45-1:00 **Lunch** (participants on own: Student Center, Area restaurants, etc.)

1:00-2:00 **Application: Team Building Simulation.** (Home Teams: refer to room assignment sheet for your consortium; facilitator will direct you to room.)

- Assistance from Facilitators/Beth Dailey

2:00-2:30 **Discuss Team Building Simulation**: Auditorium

- Beth Dailey

2:30-2:45 **Break** (area outside auditorium)

2:45-3:45 **Wisconsin Integrated and Applied Curriculum Development Process. Speaker to discuss the framework and process for integrated and applied curricula model:** Auditorium

- Susan M. Grady, Chief, Program Development Section, DPI.

3:45-4:15 **Question and Answer period.**

4:15-5:00 **Home Teams Review Day's Activities:** (Refer to room assignment sheet for your consortium; facilitator will direct you to room.)

4:14-5:00 **UW Faculty Meeting:** Auditorium

5:00-5:45 **Facilitator Orientation for Days 2-4:** Harvey Hall 303

OPTIONAL ATTENDANCE

5:00-5:30 Discuss University Credit & Independent Study.
Meet in Harvey Hall Auditorium for overview by Howard Lee

Tuesday (June 21) Conference meets in Great Hall of the Student Center

8:00-9:30 **Panel Presentation on Wisconsin Integrated and Applied Curriculum Development Process.**
•Presentation from educators actively involved in integrated and applied curriculum activities.
•Question and answer period on the integrated and applied curriculum development process.

•John Fortier: English/Language Arts Assessment Consultant, DPI
•Howard Kallio, Ann Ward, Kathryn Thompson, John Cicero and Laura Taylor: South Milwaukee High School

9:30-9:45 **Break** (Great Hall)

9:45-10:45 **Home Teams Work on Applying the Wisconsin Integrated and Applied Curriculum Development Process to their Schools (in units, courses and/or programs). (Apply Team Skills)**
(Great Hall: Meet as a consortium; location to be identified.)

10:45-11:15 **Question/Answer Period.**

11:15-12:00 **Home Teams Continue Work on Applying the Wisconsin Integrated and Applied Curriculum Development Process to their Schools.**

12:00-1:15 **Lunch** (participants on own: Student Center, Area restaurants, etc).

1:15-2:15 **Share and Tell (1/2 of Districts Display Their Integrated and Applied Curriculum Materials.** (Great Hall)

2:15-2:30 **Break** (Great Hall)

2:30-3:30 **Teaching Strategies for Integrated and Applied Curriculum Materials.**
•Cooperative Learning.

•Hector Cruz: Assistant Professor, Dept. of Education, UW-Stout.

3:30-4:30 **Special Interest Sessions.** (Team Members Attend Different Sessions.) All rooms located in Student Center.

- **Learning Styles:** Linda Riley (UW-Stout: Gender Equity Coordintor) Northwoods Room.
- **Needs Assessment Techniques:** Orv Nelson (UW-Stout: CVTAE) White Pine Room.
- **Leadership Styles-Myers-Briggs:** Sherri Johnson (UW-Stout: SIT) Room 123.
- **Multiple Intelligences:** Don Viegut (Merrill School District) Cedarwood/Maplewood Room.
- **Tie in Wisconsin Developmental Guidance Model with Learner Outcomes:** Dutch Van Den Heuvel (UW-Stout: Counseling & Psych Services) Badger Room.
- **Teaching Strategies:** Follow-up discussion: Hector Cruz (UW-Stout: Dept. of Education) Prairie/Pioneer Room.
- **Integration Techniques:** Ken Welty (Associate Professor, Communication, Education & Training Dept., UW-Stout) Great Hall.

OPTIONAL SESSIONS:

4:30-5:00 **Questions/Answers on Independent Study** (Great Hall)

- Howard Lee: Associate Dean, School of Industry and Technology, UW-Stout.

7:00-7:45 **DACUM Presentation** (Cedarwood/Maplewood Room of Student Center)

- Orville Nelson: Director, CVTAE, UW-Stout

Wednesday (June 22) Meet in Harvey Hall Auditorium

8:00-9:15	**Presentation: Authentic Assessment-Strategies & Tools.** (Auditorium) •Donna Moll: Director of Curriculum, Middleton School District.
9:15-11:15	**Home Teams Work On:** **•Teaching Strategies** **•Assessment Strategies and Techniques** **•Curriculum Integration** **•Team Building Skills** (Refer to room assignment sheet for your consortium; facilitator will direct you to room.) **Break during this session** (break items delivered to your area.)
11:15-11:45	**Questions and Answers.** (Auditorium)
11:45-1:00	**Lunch** (participants on own: Student Center, Area restaurants, etc.)
1:00-2:00	**Share and Tell (1/2 of Districts Display Their Integrated and Applied Curriculum Materials.** (Construction Lab of Tech Wing)
2:00-2:15	**Break** (Construction Lab)
2:15-3:15	**Presentation-Organizational and Personal Change.** (Auditorium) •Ed Biggerstaff, Dean, School of Education and Human Services, UW-Stout.
3:15-4:15	**Application of Change Techniques: Work Session.** (Refer to room assignment sheet for your consortium; facilitators will direct you to room.)
4:15-4:30	**Questions and Answers.** (Auditorium)
4:30-5:00	**Planning for Change (Overview of what will occur in Thursday's Sessions).** (Auditorium)
	OPTIONAL SESSIONS:
7:00-9:00	**7 Habits of Highly Effective People** (Cedarwood/Maplewood Room of the Student Center) •Sylvia Nelson: Career Planning Instructor, Menomonie Campus, Chippewa Valley Technical College **Mentoring.** (Room 123 of the Student Center) •Howard Lee: Associate Dean, School of Industry and Technology, UW-Stout

Thursday (June 23) Meet in Great Hall of the Student Center

8:00-8:30 **Roles of the Integrated and Applied Curriculum Leadership Cadre.**

•Mike Galloy, Mary Jane Best-Louther, Gabrielle Wacker

8:30-9:30 **Strategic Planning Techniques.** (Great Hall)

•Jim Schultz, LVEC/Education for Employment Coordinator, Edgerton Public Schools.

9:30-11:15 **Home Teams Work on Strategic Plans.** (Great Hall: meet as consortium, location to be identified)

Break during this session (Great Hall)

11:15-11:45 **Questions and Answers.**

•Jim Schultz.

11:45-1:00 **Lunch** (participants on own: Student Center, Area restaurants, etc).

1:00-1:45 **Action Planning:**
•Purpose
•Technique
•Format
(Great Hall)

•Howard Lee, Associate Dean, School of Industry and Technology, UW-Stout.

1:45-3:30 **Home Teams Work On Action Plans.**
•Team Plan
•Individual Plan
(Great Hall)

•Assistance from Howard Lee and Facilitators.

Break during this session (Great Hall)

3:30-4:30 **Teams Share Plans Within Their Tech Prep Consortiums**
(Great Hall)

4:30-5:00 **Closing Ceremony:**
•Present Certificates
•Participants turn in Evaluation Form

THANK YOU FOR ATTENDING THIS CONFERENCE.
HAVE A SAFE TRIP HOME AND ENJOY THE SUMMER!!!!

(14)

«DATA TPLG Names»

April 14, 1994

«Line 1»
«Line 2»
«Line 3»
«Line 4»
«Line 5»

Dear «Salutation:»

The **Integrated and Applied Curricula Summer Conference** is fast approaching. This letter will provide you with information on: the participant/team selection process; the procedures to be used in pre-registering for the conference; the summer conference registration form; a tentative agenda; and, an information bulletin that includes motel sites. You are the only individual in your consortium who is receiving this letter and attached information, so please review it carefully and share it with your consortium team members as soon as possible.

Each local consortium will need to identify its fourteen participants for the Summer Conference. You should have received correspondence from Mary Jane Best-Louther/Gabrielle Wacker on or about March 8 that indicated team member selection for the Summer Conference. The document was titled: "Integrated and Applied Curriculum Initiative: Follow Through Expectations For Tech Prep Leadership Group Members". Please refer to this document when recruiting/selecting team members for the Summer Conference. Remember, June participants must have participated in one of the February integration conferences. Please refer to the list of participants from your VTAE District/K-12 Secondary School Consortium who attended the February conferences.

It is important that your team members be identified as soon as possible, but no later than May 6. There are several reasons for this early date. Some of your potential team members are also considering other summer activities and they need to know if they have been selected for the June 20 conference. In addition, they will need to make reservations at either a motel or one of our dormitories if they will not be commuting to the conference. We would also like to send each participant a short needs assessment survey and have it processed prior to the conference. If you have problems in meeting the May 6 deadline, please contact Alan Gilbertson to discuss this further.

Once the participants have been identified by you, they will need to complete the pre-registration form and return it to you. (Please make copies of the form for your team members) After you have received the registration forms for your entire team, **mail them as a packet** to the attention of Alan Gilbertson at 218 Applied Arts Bldg., UW-Stout. Make your team members aware of lodging available in the Menomonie area. The Conference Information Bulletin includes a listing of motels as well as dorm room information. We have worked out a conference rate at the Holiday Manor/Best Western Motel and the Super 8 Motel in town. They should contact the motels directly and make their own lodging arrangements. The motels cannot guarantee that they will be able to hold these rooms after May 15. If they are interested in dorm lodging, they will need to indicate this on the pre-registration form. Further information will be sent directly to them if they decide to stay in the dorm.

During the first part of June, they will receive a final agenda, a campus map, an enrollment form for obtaining the college credit and any other pertinent information. The conference is scheduled to start at 9:00 a.m. on Monday, June 20. Participants will be able to pick up their informational packets between 8:00 and 9:00 a.m. on that morning. At that time, they will be able to sign up for the one graduate credit provided for conference participation, excluding the segregated fee which is $15.02 and would need to be paid for by the participant. Conference adjournment is scheduled for 5:00 p.m. on Thursday, June 23.

Our budget includes funds for the morning and afternoon coffee breaks. It is our understanding that the participants will be reimbursed for their travel and meal expenses through their local consortiums as a part of the $10,000 allocated for this purpose. There will be no reimbursement through UW-Stout.

College Credit

We have made arrangements to have one college graduate credit available for the week's participation in the conference. The regular graduate tuition is waived; however, the participants will have to pay a student fee which is $15.02. To earn the credit for the week, they will have to participate in the activities and develop a personal action plan. Participants who wish to enroll in additional credits may do so by paying the regular fees and tuition. Graduate tuition plus fees will be $147.68 per credit for the summer session. One to two additional credits can be earned by demonstrating that the action plan developed during the conference was completed during the school year. We will have more details on that for the participants when they start the conference in June. Before participants come to the conference they should check with their local school districts to determine what types of credits will qualify on their salary schedule. For example, will undergraduate credits apply to a lane change? Since local contracts vary, it is the individual participant's responsibility to be aware of what the conditions are. Once the student enrolls for undergraduate credit it is not possible to change it to graduate credit. Also, they need to check to see if the credit earned during the week of the conference will qualify on their salary schedule since they have not paid the tuition. Some school districts require that their staff pay for tuition if they are to be given a credit on the salary schedule. If there are participants who are working within a contract like this, they could pay the full cost for their tuition if they wanted to.

Sincerely yours,

Mike Galloy
Project Director
148 Communications Technology Bldg.
UW-Stout
Menomonie, WI 54751
(715) 232-2163
Fax: (715) 232-1985

Alan Gilbertson
Research Associate
218 Applied Arts Bldg.
UW-Stout
Menomonie, WI 54751
(715) 232-1383

enclosures

Pre-Registration Form

Integrated and Applied Curricula Summer Conference

June 20-23, 1994 UW-Stout Menomonie, WI 54751

Directions: Please provide the information requested below and return as directed to your consortium leader. This information will be used to prepare materials for the June conference and also send you final information on the conference. If you have any questions about the form, please contact Mike Galloy, (715) 232-2163, or Alan Gilbertson at (715) 232-1383.

Please Type or Print Clearly

NAME: ____________________ DATE: __________

SCHOOL: ______________________________

SCHOOL ADDRESS: ______________________________
(street) (city) (zip)

HOME ADDRESS: ______________________________
(street) (city) (zip)

SCHOOL PHONE: ( ) __________ SCHOOL FAX: ( ) __________

HOME PHONE: ( ) __________

Do you want to stay in the dorm? ___yes ___no

If yes, indicate if you want a single or double room and who other person would be.

____

Do you have any special restrictions/requirements? ______________________________

As part of the agenda, we are going to provide opportunities for local teams to discuss and display samples of their integrated curriculum products. We encourage you to bring samples of your curriculum materials, slides or videotapes of learning activities, and other documents. If you need special audiovisual equipment, such as a VCR or slide projector, please note it below.

Yes, we would like to discuss/display our samples.____

We would like to have available the following equipment/props:______________________________

____

Will you have your vehicle on campus for the conference?_____yes ____no
If yes, what is the license plate number?_______________

Thank you. Please return as directed in the cover memo.

Please return this to your consortium leader as indicated.

INFORMATION BULLETIN
INTEGRATED AND APPLIED CURRICULA SUMMER CONFERENCE

Dates:
June 20 - 23, 1994
Days begin at 8 am and end at 5 pm.

Location:
University of Wisconsin-Stout
Menomonie, WI

Cost:
- No registration fee.
- Morning/afternoon coffee breaks included.
- All meals on your own.
- Stipend and travel costs provided through your consortium.

Course Credit:
- One graduate credit provided for conference participation.
- Participant pays segregated student fee of $15.02 for credit.
- One to two additional credits available at graduate credit rate.

Registration:
- Must have attended Integrated and Applied Conference in February
- Must be approved by your consortium leader to attend.
- Complete and return registration form to your consortium leader.
- Further information sent to participants in early June.

Lodging:
Travel arrangements are responsibility of participant.

Best Western of Menomonie
1815 N. Broadway
Menomonie, WI 54751
Telephone: 715-235-9651

Super 8 Motel
1622 N. Broadway
Menomonie, WI 54751
Telephone: 715-235-8889

For the above motels, tell them you are with the Integrated and Applied Curricula Summer Conference/UW-Stout. Both motels have indoor swimming pools.

Bolo Country Inn
207 Pine Avenue
Menomonie, WI 54751
Telephone: 715-235-5596

UW-Stout Residence Hall
Location to be determined.

$14.00 single
$10.00 double/per person

Indicate interest in staying in dorm on pre-registration form. Further information will be sent to you on dorm location and check-in procedures. The dorms are not air conditioned. Bed and bath linens/towels are provided. Bathrooms are community bathrooms.

15

INTEGRATED AND APPLIED CURRICULUM INITIATIVE

FOLLOW THROUGH EXPECTATIONS FOR TECH PREP LEADERSHIP GROUP MEMBERS

This document will help to clarify expectations for Tech Prep Leadership Group Members during this fiscal year, and will also provide direction for the curriculum initiative over the next two years of this project. To begin, we need to look at the overview and the goal of this project.

Overview

This project is designed to bring together the participants who will be responsible for initial development, implementation and assessment of the grade levels 11-14 integrated and applied curricula. The Tech Prep Leadership Group, working with local consortium committees, will identify teams from each consortium. Each team will be made up of one vocational teacher, two academic teachers, and one administrator and will be the initiators of integrated and applied curricula at the local level. University representatives from Schools of Education will be invited to examine the possibility of incorporating integrated and applied curriculum processes into teacher preparation programs.

After an initial implementation period has been completed, selected team members will be invited to complete additional activities to refine their curricular implementation procedures. Additionally, these teachers will be trained to help other teachers in their home schools begin implementation of integrated and applied curricula. The completion of this project should result with a group of secondary, technical, and university instructors who will serve as a beginning network for training and implementing the integrated and applied curricula throughout the state.

Goal

Secondary schools and technical colleges will jointly develop integrated and applied curricula for grades 11-14 in consultation with universities, business and industry.

- This is the first year of a three year initiative and it is the intention to begin curriculum reform in the state, based on the Wisconsin Learner Goals, Outcomes, and Assessment model.
- Staff trained through the train-the-trainer summer institute will be available within each of the consortia to serve as leaders for the second and third years of this project.
- The end result after this three year project will be to have extensive staff statewide who are trained in the Wisconsin model for integrated and applied curriculum development, and utilizing this model in their classrooms.

The Wisconsin Learner Goals, Outcomes and Assessment is *the* significant focus within the Department of Public Instruction. Integrated and applied curriculum development based on that model will be used to provide the foundation and direction statewide. The Tech Prep Leadership Group (TPLG) will have a significant impact on this process as staff (11-14) within each of the consortia develop and implement integrated curricula.

Since the February conferences are now complete, it is time to discuss expectations for the TPLG members as you work with staff in your consortium. Within each consortium these expectations include:

- Set up a meeting with all participants from the February workshop to determine the needs for these participants in relation to technical assistance. This meeting needs to be coordinated prior to March 21, 1994.

- Put into place curriculum advisory teams to process and expand the integrated and applied curriculum as it is developed within the consortia. (In some cases these curriculum advisory teams will already be in place as a part of your local council implementation team).

- Follow up with the technical assistance information from U.W. Stout and Mike Galloy so that technical assistance during March-May can be matched to the individual consortium needs.

- Commit to work with all staff who attended the integration conferences. Staff will need help and support as they begin to develop integration efforts based on the Wisconsin model.

- Commitment for one (TPLG) secondary representative and one (TPLG) postsecondary representative from each consortia to further integration efforts during the next phase of this project. This includes a commitment to facilitate within your consortium at the train-the-trainer institute during June 20-24, 1994. This commitment needs to be maintained to move consortium efforts forward.

- Select participants from the Febraury workshop for the June train-the-trainer workshop. The following 4 areas need to be the focus when selecting participants for the June workshop:

  1) June participants MUST have participated in one of the February integration workshops. (Do NOT bring in new members at this time)>
  2) June participants MUST have practiced (or pilot tested) integration efforts within their classroom between February and June.
  3) Commitment MUST be made to participate in the ENTIRE June train-the-trainer workshop session. June participants may NOT pick and choose activities during that week.
  4) Each 14 member consortia team MUST include a CESA representative, and a U.W. representative, along with the technical college and secondary staff members. Again, facilitators will be secondary and postsecondary TPLG members from each consortia.

The state is providing up to $10,000 for each consortia to help with costs of this summer conference. Information will be forthcoming regarding this funding. These dollars are to be used for participants at the June workshop to cover travel, lodging, meals, and stipends.

If there are any questions, comments, or concerns regarding these expectations please contact Mary Jane Best-Louther (DPI), at (608) 267-3161, or Gabe Wacker (WTCS), at (608) 266-6174. Thank you for your efforts, and we look forward to moving ahead with the Wisconsin integrated and applied curriculum initiative.

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«DATA Merge List-Summer Conf.Part..»

June 3, 1994

«Line 1»
«Line 2»
«Line 3»
«Line 4»
«Line 5»

Dear «Salutation:»

We have received your registration for the INTEGRATED/APPLIED CURRICULA SUMMER CONFERENCE which will be held at UW-Stout on June 20-23, 1994. Please review the following information regarding conference and parking locations, the agenda, telephone message center, dorm registration (if requested), a survey on break-out and optional sessions and the registration information sheet.

1. LOCATION:

The map of the University grounds indicates the two buildings where the conference will be held, and the parking lot which must be used for parking.

- Conference Location:
  Monday: Harvey Hall Auditorium (Building #4 on map)
  Tuesday: Student Center Great Hall (Building #18 on map)
  Wednesday: Harvey Hall Auditorium
  Thursday: Student Center Great Hall
- Parking Lot #29 is available for parking. This lot is shaded "light green" on the map. No permit is required for this lot during your stay. Automobiles can be parked there overnight. This lot must to be used whether you are staying in an area motel or in the dorms. Parking tickets will be issued if you park in another lot.

2. CONFERENCE AGENDA:

An Agenda for the four-day Conference is included. Please note that you can pick up your conference materials and sign up for graduate credit between 8:00 am and 9:00 am on Monday, June 20 (in an area adjacent to the Harvey Hall Auditorium). **Please dress casual for the conference.**

Tuesday, June 21 at 3:30 pm - 4:40 pm has been set aside for 7 break-out sessions. So as to get an idea of the number of conference participants interested in a particular session and also to determine room location, we request that you indicate on the attached paper that session you may be interested in attending. Give a first, second and third choice. If you are a member of a team, you may want to have team members attend different sessions so you will be able to share information later. Also, there are several optional sessions that will be offered during the evening hours. Please indicate those sessions you may be interested in attending.

Please note the times for breaks. There will be morning and afternoon breaks provided. These breaks will consist mainly of beverages and rolls/cookies. In your conference materials packet will be a listing of places to eat breakfast, lunch or dinner.

3. **TELEPHONE MESSAGES:**

For receiving daytime telephone messages, use **(715) 232-1382**. This is the number in our Center. Messages will be forwarded to our conference location.

4. **DORM REGISTRATION:**

If you indicated on your registration form that you desired to stay in the dorm, you are to check in at Antrim-Froggatt Halls between 4:00 pm and 10:00 pm. They will take care of your dorm payment. See "F" on the map for the dorm location. The dorm entrance is in the middle of the block on the West side of the building. Bedding and towels are provided. You may want to bring a fan should the weather be hot.

5. **BREAK-OUT SESSION/OPTIONAL SESSIONS SURVEY:**

Please complete the enclosed survey pertaining to break-out/optional sessions and return it as instructed below. This will assist us with our planning for room sizes.

6. **REGISTRATION INFORMATION SHEET:**

Please review the registration information sheet. Make any corrections on the sheet and return it as instructed below. If there are no changes or corrections to be made, so indicate on the sheet and return it.

A Business Reply envelope has been provided for you. Please return the following:

•Break-out/Optional Sessions Survey.
•Registration Information Sheet with corrections/changes.

We are looking forward to having you participate in this conference and spending time on our campus and in the City of Menomonie. If you have any questions, please give us a call at our center. Should you have to cancel your attendance at the conference, please let us know so we can make adjustments in break-counts, etc.

Sincerely,

Alan Gilbertson
Research Associate
Center for Vocational, Technical
and Adult Education
218 Applied Arts Bldg.
UW-Stout
Menomonie, WI 54751
(715) 232-1383

encl.

(17)

WISCONSIN DPI

State of Wisconsin
Department of Public Instruction

Mailing Address: P.O. Box 7841, Madison, WI 53707-7841
125 South Webster Street, Madison, Wi 53702 (608) 266-3390/(608) 267-2427 TDD

John T. Benson
State Superintendent

Robert H. Gomoll
Deputy State Superintendent

Tuesday, May 31, 1994

Mary Jane Best-Louther
WI Dept of Public Instruc.
P.O. Box 7841
Madison, WI 53707

I have reviewed and approved your application for the following programs:

Integrated And Applied Curricula Summer Conference. This program is approved for 30 equivalency clock hours. The DPI approval number is 94-1305.

The verification form, PI-1681, should be validated by the participant and signed by you at the conclusion of the workshop. The form is then returned to the participants who will enclose it with their application for renewal of the five year license.

The agency verification form, PI-1682, should be completed by you and returned to this office as soon as possible upon completion of the workshop.

Sincerely,

James M. Wall, Coordinator
Equivalency Clock Hour Program

gg

Enclosures

ACTION PLAN

Date ____________

Home Team Members ____

____

Leader ____________ Address ____________________ Phone # ____________

Vision:

Mission:

ACTION PLAN

Date ____________________

Home Team Members ____

____

Leader ______________________ Address ______________________________ Phone # ______________

Goal # ____

ACTION STEPS	OBSTACLES	TIMELINE

ACTION PLAN

Date ______________

Home Team Members ____

____

Leader ______________ Address ______________ Phone # ______________

Goal # ____

ACTION STEPS	OBSTACLES	TIMELINE

ACTION PLAN

Date ____________

Home Team Members ____

____

Leader ________________ Address ________________ Phone # ____________

Goal # ____

ACTION STEPS	OBSTACLES	TIMELINE

ACTION PLAN

Date ____________

Home Team Members ____

____

Leader ____________ Address ____________ Phone # ____________

Goal # ____

ACTION STEPS	OBSTACLES	TIMELINE

19

6/23/94

EVALUATION
Integrated/Applied Curricula Summer Conference

Please rate the sessions according to the following scale:

5=E=Excellent
4=VG=Very Good
3=G=Good
2=F=Fair
1=P=Poor

Session	Response				
	E 5	VG 4	G 3	F 2	P 1
Please circle your response for each item.					
Monday, June 20					
1. Keynote speaker: "Curriculum Change: Innovations, Integration and Application."	5	4	3	2	1
2. Team Building Skills	5	4	3	2	1
3. Team Building Simulation	5	4	3	2	1
4. WI Integrated and Applied Curriculum Development Process - The Framework and Process for Integrated and Applied Curricula Model	5	4	3	2	1
Tuesday, June 21					
5. Panel Presentation on WI Integrated and Applied Curriculum Development Process	5	4	3	2	1
6. Home Team Work on Applying the Process to Their Schools	5	4	3	2	1
7. Share and Tell	5	4	3	2	1
8. Teaching Strategies for Integrated and Applied Curriculum Materials - Cooperative Learning	5	4	3	2	1
9-15. Special Interest Sessions. Rate Each Session Attended.					
9. Learning Styles	5	4	3	2	1
10. Needs Assessment Techniques	5	4	3	2	1
11. Leadership Styles	5	4	3	2	1
12. Multiple Intelligences	5	4	3	2	1
13. Tie in WI Developmental Guidance Model with Learner Outcomes	5	4	3	2	1
14. Teaching Strategies	5	4	3	2	1
15. Integration Techniques	5	4	3	2	1
16. DACUM	5	4	3	2	1

. . . GO TO NEXT PAGE. . .

	Response				
Session	E 5	VG 4	G 3	F 2	P 1
Please circle your response for each item.					
Wednesday, June 22					
17. Authentic Assessment - Strategies and Tools	5	4	3	2	1
18. Home Team Work on Strategies, etc.	5	4	3	2	1
19. Share and Tell	5	4	3	2	1
20. Organizational and Personal Change	5	4	3	2	1
21. Work Session - Application of Change Techniques	5	4	3	2	1
22. 7 [illegible]its of Highly Effective People	5	4	3	2	1
23. Mentoring	5	4	3	2	1
Thursday, June 23					
24. Roles of the Integration and Applied Curriculum Leadership Cadre	5	4	3	2	1
25. Strategic Planning Techniques	5	4	3	2	1
26. Home Team Work on Strategic Plans	5	4	3	2	1
27. Action Planning	5	4	3	2	1
28. Home Team Work on Action Plans	5	4	3	2	1
29. Overall Rating of Conference	5	4	3	2	1
30. Breaks	5	4	3	2	1
31. Facilities	5	4	3	2	1

32. Please write any comments regarding any of the sessions below:

. . .GO TO NEXT PAGE. . .

33. Finally, having attended this conference, please indicate areas that you feel you need to receive additional information in order to accomplish trainer responsibilities.

Thank you. Please return this form to one of the conference facilitators.

Have a safe trip home.

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ISAP, Version 2.0,  VAX-11 BASIC. Program: DES101                 Page: 1
enter for Vocational Technical and Adult Education
roup numbers based on the PRIMARY group for this analysis
nalysis on 27-Jun-94 at 06:28 PM.  Data from file: INTEGRATEDCURRICULA_94
urvey analysis of response to 33 questions, by 117 people
===========
uestion: 1    KEYNOTE SPEAKER: "CURRICULUM CHANGE: INNOVATIONS, INTEGRATION AND APPLICATION."
===========
 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
       Omit  No Omit     Omit    No Omit    People  Checks First Median Third IQR
  0     4.42   4.46      1.00     0.81       117     117   3.98  4.69   5.10  1.11

 Omit    1    2    3    4    5
 0.01 0.00 0.03 0.09 0.25 0.62 People
    1    0    4   11   29   72

===========
uestion: 2    TEAM BUILDING SKILLS.
===========
 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
       Omit  No Omit     Omit    No Omit    People  Checks First Median Third IQR
  0     3.61   3.64      1.08     0.96       117     117   2.95  3.74   4.34  1.39

 Omit    1    2    3    4    5
 0.01 0.02 0.11 0.26 0.42 0.18 People
    1    2   13   31   49   21

===========
uestion: 3    TEAM BUILDING SIMULATION.
===========
 Group ---- Mean ---*-   --- Stand Dev ---   --- Number ---   ------ Quartile ------
       Omit  No Omit     Omit    No Omit    People  Checks First Median Third IQR
  0     3.74   3.77      1.16     1.05       117     117   3.03  3.86   4.62  1.59

 Omit    1    2    3    4    5
 0.01 0.03 0.07 0.27 0.33 0.28 People
    1    4    8   32   39   33

===========
uestion: 4    FRAMEWORK AND PROCESS FOR INTEGRATED AND APPLIED CURRICULA MODEL.
===========
 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
       Omit  No Omit     Omit    No Omit    People  Checks First Median Third IQR
  0     2.80   2.90      1.17     0.90       117     117   2.31  2.95   3.50  1.19

 Omit    1    2    3    4    5
 0.03 0.07 0.21 0.44 0.22 0.02 People
    4    8   25   52   26    2

===========
uestion: 5    PANEL PRESENTATION: WI INTEGRATED AND APPLIED CURRICULUM DEVELOPMENT PROCESS.
===========
 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
       Omit  No Omit     Omit    No Omit    People  Checks First Median Third IQR
  0     3.31   3.46      1.48     1.08       117     117   2.66  3.55   4.29  1.63

 Omit    1    2    3    4    5
 0.04 0.03 0.16 0.26 0.32 0.17 People
    5    4   19   31   38   20
```

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DISAP, Version 2.0,  VAX-11 BASIC. Program: DES101                  Page: 2
Center for Vocational Technical and Adult Education
Group numbers based on the PRIMARY group for this analysis
Analysis on 27-Jun-94 at 06:28 PM.  Data from file: INTEGRATEDCURRICULA_94
Survey analysis of response to 33 questions, by 117 people
============
Question: 6   HOME TEAM WORK ON APPLYING THE PROCESS TO THEIR SCHOOLS.
============
 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit      Omit   No Omit   People  Checks First Median Third IQR
  0      3.47   3.56       1.37      1.11     117     117   2.75  3.66   4.43 1.68

 Omit    1    2    3    4    5
 0.03 0.03 0.15 0.26 0.32 0.22 People
    3    4   17   30   37   26

============
Question: 7   SHARE AND TELL.
============
 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit      Omit   No Omit   People  Checks First Median Third IQR
  0      2.39   2.67       1.71      1.23     117     117   1.68  2.59   3.49 1.81

 Omit    1    2    3    4    5
 0.10 0.18 0.25 0.25 0.14 0.09 People
   12   21   29   29   16   10

============
Question: 8   TEACHING STRATEGIES FOR I/A CURRICULUM MATERIALS - COOPERATIVE LEARNING.
============
 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit      Omit   No Omit   People  Checks First Median Third IQR
  0      3.51   3.61       1.36      1.09     117     117   2.85  3.78   4.40 1.55

 Omit    1    2    3    4    5
 0.03 0.04 0.13 0.21 0.39 0.21 People
    3    5   15   24   46   24

============
Question: 9   LEARNING STYLES.
============
 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit      Omit   No Omit   People  Checks First Median Third IQR
  0      0.53   4.13       4.27      0.52     117     117   3.75  4.09   4.43 0.68

 Omit    1    2    3    4    5
 0.87 0.00 0.00 0.01 0.09 0.03 People
  102    0    0    1   11    3

============
Question: 10   NEEDS ASSESSMENT TECHNIQUES.
============
 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit      Omit   No Omit   People  Checks First Median Third IQR
  0      0.21   4.17       4.66      0.98     117     117   3.25  4.50   5.00 1.75

 Omit    1    2    3    4    5
 0.95 0.00 0.00 0.02 0.01 0.03 People
  111    0    0    2    1    3
```

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DISAP, Version 2.0,  VAX-11 BASIC. Program: DES101                Page: 3
Center for Vocational Technical and Adult Education
Group numbers based on the PRIMARY group for this analysis
Analysis on 27-Jun-94 at 06:28 PM.  Data from file: INTEGRATEDCURRICULA_94
Survey analysis of response to 33 questions, by 117 people
============
Question: 11    LEADERSHIP STYLES.
============
 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit     Omit   No Omit   People  Checks First Median Third IQR
   0     0.43   4.17      4.39     0.72      117     117  3.67  4.17   4.75  1.08

 Omit    1    2    3    4    5
 0.90 0.00 0.00 0.02 0.05 0.03 People
  105    0    0    2    6    4

============
Question: 12    MULTIPLE INTELLIGENCES.
============
 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit     Omit   No Omit   People  Checks First Median Third IQR
   0     0.48   3.29      3.64     1.40      117     117  2.06  3.60   4.45  2.39

 Omit    1    2    3    4    5
 0.85 0.02 0.03 0.02 0.04 0.03 People
  100    2    4    2    5    4

============
Question: 13    TIE IN WI DEVELOPMENTAL GUIDANCE MODEL WITH LEARNER OUTCOMES.
============
 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit     Omit   No Omit   People  Checks First Median Third IQR
   0     0.32   3.80      4.18     1.23      117     117  2.75  4.00   4.88  2.13

 Omit    1    2    3    4    5
 0.91 0.00 0.02 0.02 0.02 0.03 People
  107    0    2    2    2    4

============
Question: 14    TEACHING STRATEGIES.
============
 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit     Omit   No Omit   People  Checks First Median Third IQR
   0     0.85   4.17      4.26     0.87      117     117  3.61  4.28   4.90  1.29

 Omit    1    2    3    4    5
 0.79 0.00 0.01 0.03 0.08 0.09 People
   93    0    1    4    9   10

============
Question: 15    INTEGRATION TECHNIQUES.
============
 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit     Omit   No Omit   People  Checks First Median Third IQR
   0     1.50   3.91      3.72     0.73      117     117  3.55  3.96   4.38  0.83

 Omit    1    2    3    4    5
 0.62 0.00 0.02 0.07 0.23 0.07 People
   72    0    2    8   27    8
```

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DISAP, Version 2.0,  VAX-11 BASIC. Program: DES101                    Page: 4
Center for Vocational Technical and Adult Education
Group numbers based on the PRIMARY group for this analysis
Analysis on 27-Jun-94 at 06:28 PM.  Data from file: INTEGRATEDCURRICULA_94
Survey analysis of response to 33 questions, by 117 people
============
Question: 16    DACUM.
============
 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit     Omit   No Omit  People  Checks First Median Third IQR
   0    0.34   4.00       4.28    0.82     117     117   3.33  4.00   4.67  1.33

 Omit    1    2    3    4    5
 0.91 0.00 0.00 0.03 0.03 0.03 People
  107    0    0    3    4    3

============
Question: 17    AUTHENTIC ASSESSMENT - STRATEGIES AND TOOLS.
============
 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit     Omit   No Omit  People  Checks First Median Third IQR
   0    3.43   3.61       1.57    1.07     117     117   2.91  3.79   4.38  1.47

 Omit    1    2    3    4    5
 0.05 0.04 0.11 0.21 0.40 0.19 People
    6    5   13   24   47   22

============
Question: 18    HOME TEAMS WORK ON STRATEGIES, ETC.
============
 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit     Omit   No Omit  People  Checks First Median Third IQR
   0    3.45   3.51       1.37    1.20     117     117   2.78  3.71   4.41  1.63

 Omit    1    2    3    4    5
 0.02 0.09 0.09 0.24 0.35 0.21 People
    2   11   10   28   41   25

============
Question: 19    SHARE AND TELL.
============
 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit     Omit   No Omit  People  Checks First Median Third IQR
   0    2.30   2.72       1.92    1.25     117     117   1.70  2.69   3.58  1.88

 Omit    1    2    3    4    5
 0.15 0.17 0.21 0.25 0.14 0.09 People
   18   20   24   29   16   10

============
Question: 20    ORGANIZATIONAL AND PERSONAL CHANGE.
============
 Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit     Omit   No Omit  People  Checks First Median Third IQR
   0    3.06   3.28       1.72    1.23     117     117   2.29  3.37   4.29  2.00

 Omit    1    2    3    4    5
 0.07 0.08 0.20 0.22 0.26 0.18 People
    8    9   23   26   30   21
```

```
DISAP, Version 2.0,  VAX-11 BASIC. Program: DES101                Page: 5
Center for Vocational Technical and Adult Education
Group numbers based on the PRIMARY group for this analysis
Analysis on 27-Jun-94 at 06:28 PM.  Data from file: INTEGRATEDCURRICULA_94
Survey analysis of response to 33 questions, by 117 people
============
Question: 21   WORK SESSION - APPLICATION OF CHANGE TECHNIQUES.
============
 Group ---- Mean ----   --- Stand Dev ---  --- Number ---   ------ Quartile ------
         Omit  No Omit     Omit   No Omit   People  Checks First Median Third IQR
  0      2.91   3.18       1.67     1.06      117     117   2.49  3.26   4.01 1.52

 Omit    1    2    3    4    5
 0.09 0.07 0.16 0.30 0.31 0.08 People
   10    8   19   35   36    9

============
Question: 22   SEVEN HABITS OF HIGHLY EFFECTIVE PEOPLE - AN OVERVIEW.
============
 Group ---- Mean ----   --- Stand Dev ---  --- Number ---   ------ Quartile ------
         Omit  No Omit     Omit   No Omit   People  Checks First Median Third IQR
  0      0.59   3.45       3.66     1.10      117     117   2.88  3.50   4.21 1.34

 Omit    1    2    3    4    5
 0.83 0.02 0.00 0.07 0.06 0.03 People
   97    2    0    8    7    3

============
Question: 23   MENTORING.
============
 Group ---- Mean ----   --- Stand Dev ---  --- Number ---   ------ Quartile ------
         Omit  No Omit     Omit   No Omit   People  Checks First Median Third IQR
  0      0.26   4.43       4.84     0.79      117     117   3.88  4.63   5.06 1.19

 Omit    1    2    3    4    5
 0.94 0.00 0.00 0.01 0.02 0.03 People
  110    0    0    1    2    4

============
Question: 24   ROLES OF THE I/A CURRICULA LEADERSHIP CADRE.
============
 Group ---- Mean ----   --- Stand Dev ---  --- Number ---   ------ Quartile ------
         Omit  No Omit     Omit   No Omit   People  Checks First Median Third IQR
  0      3.22   3.40       1.48     1.02      117     117   2.66  3.32   4.20 1.54

 Omit    1    2    3    4    5
 0.05 0.02 0.16 0.36 0.25 0.16 People
    6    2   19   42   29   19

============
Question: 25   STRATEGIC PLANNING TECHNIQUES.
============
 Group ---- Mean ----   --- Stand Dev ---  --- Number ---   ------ Quartile ------
         Omit  No Omit     Omit   No Omit   People  Checks First Median Third IQR
  0      3.78   3.84       1.42     1.23      117     117   3.12  4.11   4.85 1.73

 Omit    1    2    3    4    5
 0.02 0.08 0.07 0.16 0.30 0.38 People
    2    9    8   19   35   44
```

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ISAP, Version 2.0,  VAX-11 BASIC. Program: DES101                  Page: 6
enter for Vocational Technical and Adult Education
roup numbers based on the PRIMARY group for this analysis
nalysis on 27-Jun-94 at 06:28 PM.  Data from file: INTEGRATEDCURRICULA_94
urvey analysis of response to 33 questions, by 117 people
===========
uestion: 26   HOME TEAM WORK ON STRATEGIC PLANS.
===========
Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit    Omit   No Omit   People  Checks First Median Third IQR
  0      3.62   3.99     2.03     1.12     117     117   3.33  4.22   4.90  1.56

Omit    1    2    3    4    5
0.09 0.05 0.03 0.18 0.27 0.38 People
  11    6    3   21   32   44

===========
uestion: 27   ACTION PLANNING.
===========
Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit    Omit   No Omit   People  Checks First Median Third IQR
  0      3.17   3.86     2.47     1.07     117     117   3.20  4.00   4.73  1.53

Omit    1    2    3    4    5
0.18 0.04 0.03 0.20 0.29 0.26 People
  21    5    3   23   34   31

===========
uestion: 28   HOME TEAM WORK ON ACTION PLANS.
===========
Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit    Omit   No Omit   People  Checks First Median Third IQR
  0      3.21   4.03     2.67     1.04     117     117   3.40  4.22   4.89  1.49

Omit    1    2    3    4    5
0.21 0.03 0.03 0.15 0.26 0.32 People
  24    3    4   18   30   38

===========
uestion: 29   OVERALL RATING OF CONFERENCE.
===========
Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit    Omit   No Omit   People  Checks First Median Third IQR
  0      3.21   3.44     1.52     0.85     117     117   2.81  3.55   4.11  1.29

Omit    1    2    3    4    5
0.07 0.01 0.13 0.31 0.42 0.07 People
   8    1   15   36   49    8

===========
uestion: 30   BREAKS.
===========
Group ---- Mean ----  --- Stand Dev ---  --- Number ---  ------ Quartile ------
        Omit  No Omit    Omit   No Omit   People  Checks First Median Third IQR
  0      4.03   4.44     2.08     0.86     117     117   3.95  4.72   5.11  1.16

Omit    1    2    3    4    5
0.09 0.01 0.02 0.12 0.18 0.58 People
  11    1    2   14   21   68
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DISAP, Version 2.0,  VAX-11 BASIC. Program: DES101               Page: 7
Center for Vocational Technical and Adult Education
Group numbers based on the PRIMARY group for this analysis
Analysis on 27-Jun-94 at 06:28 PM.  Data from file: INTEGRATEDCURRICULA_94
Survey analysis of response to 33 questions, by 117 people
============
Question: 31  FACILITIES.
============
 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit    Omit   No Omit    People  Checks First Median Third IQR
   0    3.83   4.07      1.69     0.96      117     117   3.47  4.23   4.89  1.42

 Omit    1    2    3    4    5
 0.06 0.00 0.08 0.16 0.32 0.38 People
    7    0    9   19   37   45

============
Question: 32  COMMENTS REGARDING ANY OF THE SESSIONS.
============
 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit    Omit   No Omit    People  Checks First Median Third IQR
   0    0.65   1.00      0.77     0.00      117     117   0.75  1.00   1.25  0.50

 Omit    1
 0.35 0.65 People
   41   76

============
Question: 33  AREAS YOU FEEL YOU NEED TO RECEIVE ADDITIONAL INFORMATION IN ORDER TO
============  ACCOMPLISH TRAINER RESPONSIBILITIES.
 Group ---- Mean ----   --- Stand Dev ---   --- Number ---   ------ Quartile ------
        Omit  No Omit    Omit   No Omit    People  Checks First Median Third IQR
   0    0.68   1.00      0.74     0.00      117     117   0.75  1.00   1.25  0.50

 Omit    1
 0.32 0.68 People
   38   79
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EVALUATION COMMENTS REGARDING SUMMER CONFERENCE

1. Keynote Speaker: "Curriculum Change: Innovations, Integration and Application."
   - Excellent - Bensen

2. Team Building Skills.
   - Fair - Middle school people have done tons of this.
   - Poor - No authentic applied activity.

3. Team Building Simulation.
   - Poor - Our facilitator gave us incorrect guidance.

4. WI Integrated and Applied Curriculum Development Process - The Framework and Process for Integrated and Applied Curricula Model.
   - Poor - We were beyond this.
   - Good - Should have used applied/integrated example.
   - Not Rated - Still was not clear - needed the model.

5. Panel presentation on WI Integrated and Applied Curriculum Development Process
   - Fair - Wanted to hear more of teacher process.
   - Fair - Too long.
   - Fair - Information okay, but way too long.
   - Very Good - Mr. Kallio was excellent.

6. Home Team Work on Applying the Process to Their Schools.
   - Fair/Poor-Too much noise.
   - Fair - Lacked direction.
   - Poor - Let us work by school.
   - Fair - We are new and getting organized.
   - Excellent - Good discussion.
   - Fair - No direction provided.
   - Fair - We had no big picture.

7. Share and Tell

   - Fair/Poor - Too much noise
   - Good - Too few people to schedule for that much time.
   - Poor - Worthless as organized.
   - Fair - Poorly set up.
   - Poor - Needed more direction.
   - Fair - More.
   - Poor - Not enough.
   - Fair - Good concept - poorly organized/promoted.

8. Teaching Strategies for Integrated and Applied Curriculum Materials - Cooperative Learning.

   - Very Good - Good review and connection to A/I.
   - Poor - Old information.
   - Good - Apply to high school.
   - Excellent
   - Very Good - Interesting.

14. Teaching Strategies.

    - Excellent - Hector Cruz

15. Integration Techniques.

    - Excellent - Very Good - to the point - new material.

17. Authentic Assessment - Strategies and Tools.

    - Excellent - Easy and relevant speaker - liked the list of books included in agenda. Well prepared. Organized.
    - Excellent - Very well presented.
    - Fair - Too broad.
    - Fair - Should have been practical.

18. Home Team Work on Strategies, Etc.

- Poor - We wanted to work with home school team.
- Not Rated - Lack of Direction.
- Poor - Worthless unless work by school.
- Poor - Need home teams, not consortium
- Poor - Home team time was not given.

19. Share and Tell

- Poor - Not enough.
- Poor - Not enough direction.

20. Organizational and Personal Change.

- Excellent - Good information - bad time to have.
- Fair - Needed visuals
- Fair - Needed handouts - move along.
- Fair - Boring - good information, poor style.
- Fair - Model it.

21. Work Session - Applications of Change Techniques.

- Poor - We wanted to do work with home school team.
- Poor - Our facilitator, again, didn't follow through with the task.

24. Roles of the Integration and Applied Curriculum Leadership Cadre.

- Very Good - Needed to know this the first day.
- Fair - Why wasn't this spelled out in February?
- Fair - Why.
- Good - Should have given us this on day one.
- Very Good - Should have been done first day.
- Very Good - Nice job.

25. Strategic Planning Techniques.

- Very Good - Should have been earlier in week.
- Fair - Good talk - not about strategic planning.
- Excellent - Joel Barker.

26. Home Team Work on Strategic Plans.

- Poor - Worthless unless work by school.

27. Action Planning.

- Poor - As planned by conference.

28. Home Team Work on Action Plans.

- Poor - As planned by conference.

29. Overall Rating of Conference.

- Do not like these scales.
- Good - We worked with our school team during the work time - but that is not what you wanted us to do.
- Good - Too long of lectures and work times.

30. Breaks

- Excellent - Great food - well timed.

31. Facilities

- Very Good - Harvey Hall-Poor. Student Center-Great.
- Good - Too cold.
- Very Good - Auditorium tight.
- Very Good - Student Center.
- Fair - Harvey Hall.
- Very Good - Cramped in auditorium.

31. Facilities-continued

- Very Good - The Great Hall was excellent. Too bad we could not have been here the entire time.
- Excellent - Except for Harvey auditorium.
- Excellent - Tuesday and Thursday.
- Student Union Great Hall was nice, but the theater was poor.
- Very Good - When in auditorium.
- Excellent - Student Center/Very Good - Harvey.
- Fair - Harvey Hall.
- Very Good - Nice campus.
- Excellent - Great Hall
- Excellent - Student Center/Poor - Harvey Hall

WRITTEN COMMENTS TO EVALUATION FORM

INTEGRATED/APPLIED CURRICULA SUMMER CONFERENCE

JUNE 20-23, 1994

32. Please write any comments regarding any of the sessions below:

- Although the Great Hall was large, it was very noisy when groups were working. Smaller rooms would have been helpful. Main speakers were very informative. People got a taste of a lot of important topics. You did a great job managing so many people for four days!

- Hector Cruz was fantastic! He really made me excited to try cooperative learning. Jim Schultz was excellent! He really helped us see where we were going. Ed Biggerstaff - quiet, but what he said hit home. I really got a lot out of what he said. This was a great four days. Thank you for all of your hard work.

- I heard a lot of groups wondering how all of these sections related. Since Mike Galloy acted as MC between sessions, I would have liked to hear him telling the connections between the speakers and the overall target of the conference. I was able to make the connections - but not until the third day.

- Facilities - the days in the Great Hall were great. Harvey Hall was disruptive and difficult to work in. Ed Biggerstaff - excellent information - easy to apply/follow.

- I feel that the organizers did a great job putting this conference together. I feel that the most success would come from actually doing more activities - assessments - planning to show how to accomplish a quality integrated-applied lesson.

- Thank you for bringing your "vision" to us. Most of the conference was helpful to me, personally; however, I do feel we could have done it in less time - perhaps two days?

- Several groups in one large room does not work. Too much noise on Tuesday and Thursday.

- I feel like a student who has been evaluated on a project by a teacher who is reluctant to share the criteria. Also, I felt like my task was to write curriculum tasks this week, when in reality it was to prepare myself/team to work with others. I know this was stated, but it should have been emphasized. Clearly connections should have been made between the sessions and our mission. Finally, a focus or structure for work with the action plan forms! We should have had them Monday.

- Conference did not reflect what was being discussed. Eg. Make your conference integrated. Would suggest beginning with purpose of the four days and then a handout showing how each activity/speaker supports that purpose. Now I can go home and train other teachers - where is my "trainer handbook" to tell me what I need to do? Suggested ways to start? Speaker for change had 45 pages - surely he knows that was too much for one hour and could have provided us with content outline at least. Was a Needs Assessment done before this four day project? Feel like many of us needed something else than what we got. Your evaluation sheet needs to include questions such as: DID THIS CONFERENCE MEET YOUR NEEDS? WHY? WHAT DO YOU NEED FOR FUTURE? WHY? Great campus and break food - thanks for the fruit. Thanks for one hour and 15 minute lunches. The networking was great. Liked the choices with #9-15 (Tuesday, PM). Wish this format would have been used throughout to allow us to pick and choose to meet our needs.

32. Please write any comments regarding any of the sessions below - Continued

- Item #24 was a little out of cinch - it would have helped more to have it on day one. Item #20 presenter needs to develop a more (reduced content) presentation. It was mostly a string of aphorisms noteworthy for its nonsuiturs. Item #30 special praise to food service personnel for their work.

- It would have been better to have been given the "task" sheet the first day. 8:00 to 4:00 would be a better time frame. The snacks were great.

- Too much material to absorb in too short of time. The lack of continuity was confusing.

- This was a very useful session for our group because we worked together in our school group and got good ideas from some speakers. I feel the other teams did not get as much, especially out of the home team work.

- Overall conference was very beneficial. It would have been appropriate to let participants know on Monday what written work/project were required. Home teams could have received some type of "lead up" or structural articity format to build up to our project (at home) and the strategic and action plan.

- I hope we can continue with another (3rd) conference next year. I would enjoy more hands on-ex. murder mystery.

- A very illuminating conference - you are getting people much better informed now and prepared to function as trainers in their consortium.

- Some of the sessions; co-op learning, assessment, strategic planning are redundant. We have heard this so many times before. I really enjoyed the challenges presented by Ed Biggerstaff. It was refreshing.

- Food offered at breaks were outstanding. All of my needs were met and it was an excellent conference. I really enjoyed my first visit to Stout. Thank you. I will look forward to continued support of my efforts as I share information about and promote these concepts.

- #24 should have been presented to us the first day so we could get a better picture of the total scope of the project.

- The requirements, objectives and action planning should have been presented first thing on Monday morning. We would have been much more efficient.

- We worked with our school team - not consortium - or it would have been worthless to us. We needed the time here to develop our plan. Days too long - move beyond theory into application - continue beyond what we learned in Stevens Point.

- Sitting at tables best/most comfortable. We did not have the necessary schedules and class rosters, current curricula of disciplines to call on more thorough planning/strategies so our work came to a halt.

- More on assessment - not from DPI, from practitioners. Model behaviors, expectations, used applied and integrated techniques. A bibliography of resources would be helpful.

32. Please write any comments regarding any of the sessions below - Continued

- This share and tell would have been better if each group presented to entire group. I thought we would learn more skills related to presenting/organizing applied/integrated curriculum in our district - more hands-on, modeling.

- A little more technology in the presentations.

- Monday- Tell us the objective of team building rather than just doing it.
  Tuesday-You placed a lot of credence on a team that has not actually worked together - at this point everything is theoretical. What is your definition of home team? Consortium or school? Spell it out so schools know if it is worthwhile to send people. Cooperative learning should have shown how to use it with performance tasks - the first presentation was redundant (but well done).
  Generally - Time to work on plans was a farce. What time? Eight to five is too long a day. Since the people here supposedly were in Point or Madison this should have been a continuation, not beginning all over again.

- Given that everyone at this conference was suppose to have been involved in a previous workshop, the speakers should have been beyond theory of each concept into the practical application. For example, cooperative learning started as if we had never heard of it when in reality most have incorporated it. I now need more practical solutions or "we have learned that this does work or does not work." Again more practical writing performances task and assessment, not the rationale of why. Days became too long. You want us to move on, so these workshops also need to do this.

- Facilities were excellent. I feel the strategic planning should have been first. Try to give us purpose from the beginning then pieces fall in better. Good format of present-applying. Some of the speakers did not seem aware of the knowledge or experience of the audience. This could have been a three day conference.

- The goals of the conference should have been made more clear during the conference and before. Our consortium was not sure whether we were to develop a plan for our school or a plan to be disseminated to other schools. Also, day four should have been earlier. It also would have been nice to see presenters give me practical use of methods #6 - Not enough time and direction. #15 - Should have been a required topic to illustrate how it could be phased into where programs are at. #32 - Harvey Hall was too crowded and no place to write. Student Center was much better. #29 - 4 if getting consortium going and 2 if meeting my original expectations of coordinating curriculum.

- The timing of this workshop conflicted with a very important local workshop in our area. Our interested motivated people could not be here.

- I would have preferred knowing objectives right up front. Formalize show and tell - get more. The order of events was questionable.

- Should have received the action plans early in the conference - a good tool the team could have used. More information on futuristic ideas. More information on specific tasks that mark success and failure. What other counties are doing in their education system to integrate.

32. Please write any comments regarding any of the sessions below - Continued

- Should have spent more time actually developing applied integrated tasks or at least a framework for the process of developing applied integrated tasks/units/etc. Also, a review from the February session/workshop in Madison would have been nice. More time should have been spent on how to break down the walls of the traditional school and implement this program.
- There were parts of the conference that I found very helpful - but overall I feel that not enough is known by everyone on how to implement applied and integrated curricula. If I am wrong and someone has actually achieved this goal it would have been very helpful to see a unit model - complete with objectives, activities and assessment. I want to be a pioneer, but a "patented" product would be helpful.
- Task should have been revealed immediately.
- The share and tell sessions were handled far too "softly." We should have had a list of these, their topic/subject and location, and we all should have had the chance to participate with each one, on some kind of rotating schedule. Again, all of the special interest sessions were important and to choose one and exclude the others was not fair or appropriate. We should have devoted an entire day to avail ourselves of this information, in place of some of the other presentations. With the exception of the keynote speaker and the South Milwaukee panel, the other speakers did not answer any of my questions, or serve to elevate my "already present" commitment to the need for school reform.
- These people needed the "big picture" and the primary focus - kids - first, not last!
- I really enjoyed Hector Cruz's presentation. He was enthusiastic and he passed along his enthusiasm.
- Promote recreational activities as opportunities for networking. Practice methodologies promoted by the underlying conference philosophy.
- I was very frustrated by the amount of time that was spent by speakers trying to convince me that school reform is necessary or a good idea. I know that only too well. What I was expecting was some very specific training in what to do about it and how to go about it when I get back home and I don't feel I received nearly enough training to do that effectively. The time spent in discussion and working with our consortiums and home teams was very valuable.
- The Great Hall was excellent. Too bad we could not have been here the entire time. Thanks to Stout staff for being helpful.
- Common social get-together to network and share ideas.
- The facilitators for CVTC/WITC were very helpful and patient. The most helpful information seemed to come from other schools with specific examples of what they have done.

32. Please write any comments regarding any of the sessions below - Continued

- We did not have the opportunity to integrate (mix) with the other districts around the state. Maybe a corn roast and beer session where everyone informally can rub elbows and discuss programs. Also, you could split the planning sessions to reflect a.m. for mixed integrated consortium groups and the p.m. sessions with our own consortiums for planning.
- The best sessions were those which actually demonstrated application of principles. I was disappointed that the sharing wasn't more organized. Perhaps grouping people by content for discussion of what individuals had tried in their classrooms would have helped. If done early in the conference, then we could have made contacts to speak with throughout the conference.
- There was not enough time provided to write the action plan. Perhaps if we were given the details of the task on Monday we could have focused our attention on what would have been most useful to us.
- Presenters names with evaluation titles. More than one choice for small group sessions - eliminate some time for share and tell. Overheads - many small print - need handouts for each session.
- Thursday morning's session should have been presented on Monday morning. It was ridiculous to tell us about how we were going to be assessed after we spent Monday - Wednesday working. We needed the action plan sheets at the beginning, not at the end. This was very poor planning.
- We could have done this in maybe two or three days. We got done with our home team things early and spent most of the time allotted doing other things.
- The overall goal of this workshop was unclear as to "should home team work on own school plan or consortium plan until late in the session." We have never been told that we are also involved with the training of other school systems.
- I already read the book on 7 Habits of Highly Effective People. I was expecting more examples of how to.
- Not much knowledge transfer or new knowledge. Go out of state if necessary to get good models. Not a good use of time.
- Send materials to study ahead of time. Have actual "assignments" (tasks) figured out for us that we would work on each day that would culminate in the action plan.
- Too much sit and get. More time for development of skills. Lets practice what we are teaching.
- Challenge Leadership/Team Building Skills sessions were very well done. Cooperative Learning was redundant/almost insulting as information is from teacher education class. Speakers were at times long. Eight to five days were terribly long to sit. Leadership expectations should have been more clearly "spelled out" BEFORE Conference!

32. Please write any comments regarding any of the sessions below - Continued

- We should practice what we preach. Some of the presentations were strictly verbal/listening without interaction and activity.

- Stout University Great Hall was nice, but the theater was poor.

- The task should have been given the first day and a better understanding would have happened for me. Things were extremely fragmented and transitions rough. It was difficult to draw correlation between parts and how they applied to A/I.

- The organization seemed to need some direction. Most of us did not understand that the team was not really the focus. Structure should have been designed to go from team organization and implementation to district to county to technical college to state.

- Four days was much too long. Appreciated breaks, lunch-food was great. Did people really know why they were here - what was expected - I don't think so.

- I felt that many of the speakers lack focus. It was difficult to determine just what the point was and even tougher to decide what it had to do with facilitator training. The time we had to work together was especially effective.

- Facilities excellent when in auditorium.

- To be more succinct: mini-sessions with UW-Stout people as resources would be great. A school team with one Stout person.

- Student Center excellent.

- More team time, fewer lectures. Reading to us is unnecessary and insulting. More sharing outside of teams. Send reading material ahead of time. Logistics was a problem. Cooperative learning indirectly taught by lecturing. Practice what you preach. Thanks for fruit/health at breaks.

- Too much talk, not enough modeling and help. I could not be a trainer as a result of this conference.

- Too long lectures and work times.

- I needed the overall picture first so I felt we were fumbling around in all of our work sessions for the first couple of days. More show and tell.

- Organization of agenda was backwards. Last day information and task should have been day one so we had more of a clue what was expected. Conference did not focus on advertised focus - the nuts and bolts of inservicing other people. All the talk about the need for change and pioneers was redundant. We have already gone through that. We are at Phase Four - wanting to do it - the thought that was the whole reason we had to attend the Madison Conference first.

- This was the best. I am so sad the rest of my team was not here. I am also glad we went four days because it took three days for the frustration to surface and today my prayers were answered. We were asked to look at what we do to students, how we felt having been subjected to the same thing, and to be tolerant of the process. We are on our way. Thanks so much.

32. Please write any comments regarding any of the sessions below - Continued

- Home team work strategies were not always successful because we don't have enough direction on how or what to do.

- State Department of Public Instruction should present information in a clear, concise, organized manner. Far too abstract.

- Would have liked the expected outcomes (big picture) before and at the beginning of the workshop. More than a presentation lecture for many sessions. Confusion existed about the role of the team --consortium vs. school district. Could have had some examples for work sessions/practice that related to workshop goals instead of being generic.

- Jim Bensen, Howard Kallio, Donna Moll and Jim Schultz were all great. More supervision in the home team work times would have been better. A great deal was accomplished but more could have been done.

- The strategic/action plan segment was excellent. However, this should have been a known aspect from the beginning. If this had been done at the onset, learning and team initiatives could have been focused more clearly, raising the quality of the experience and end product. Thus, enhancing the chance that what we did will be implemented.

- Monday's presentation by Sue Grady was too much repetition from Stevens Point. Teaching strategies - same information as handout. I would have benefited by receiving handouts from other sessions. Donna Moll was very good. Team Building presentation and Simulation were both great!!

- This should have been condensed into three days. If compared to business and industry standards and real world standards are we accomplishing our goals or spinning our wheels. This is not traditional Stout quality. I felt some presentations were not relevant and/or presented in a fashion opposite to the vision we promote "Sleeper Speakers." Good job and example Edgerton and Jim Schultz. The strategic planning should have been done first to show us our goal and review near the end.

- I feel it was very inappropriate for Jim Schultz to show a 40 minute film when the teams needed the time to prepare the plan that was handed out on the last session of the second to last day. The assignment should have been handed out pre-workshop.

33. Finally, having attended this conference, please indicate areas that you feel you need to receive additional information in order to accomplish trainer responsibilities.

- Teamwork and team building. How to's for integrating curriculum.
- I am still wondering what the state will actually be mandating. We need the database for names and information set up ASAP. Networking will be the key to the success of this whole project.
- Highlight groups that have had success in each area discussed. For example, Hamilton's project integrating disciplines telling everyone (rather than a spattering of people during a sharing time). And then another teaching group sharing a success of cooperative learning, assessment etc. Include usable textbooks that use an integrated theory (resources for us). Great job getting valid speakers (limiting a repetition of John Fortier's assessment speech) and providing copies of important information. I would highly recommend to have change available for an unusual amount of $15.02 (yeah right) for the credit. Knowing that almost 100% of the people attending the conference will want the credit; however, 100% will not have a check or correct change!
- Time to implement assessment tools. Step-by-step outlines-hands-on.
- Receiving the information does not make you a trainer of teachers. I have not successfully integrated or applied curriculum myself without having to teach others. I came to this conference with the idea to receive more training, and I have but, until I try again in the classroom and am more successful I won't feel confident in what I am doing.
- I am an infant. I have been at Stevens Point and here only, and am confused about the "Big Picture." I understood integrated curriculum and team building and that our schools need reform, but I feel rather swamped when I think of all the other areas (assessment, multiple learning styles, etc.) As far as being an instructor for other teachers-no way at this time. I want more ideas that have worked. I also want administrator to get this information. Cut through the jargon - Use English!
- More work with local consortium will be helpful.
- I do not want to become a trainer - I want to be a teacher.
- Button making machine. Need sources of information or bibliography so we know where to obtain reference material.
- I believe all information must be continuing.
- Follow-up and continued training relative to being proficient and efficient in training others: (1) Point specific models, (2) point specific procedures-steps to follow, (3) DPI/CESA WTCS "Field Trips" to provide informative informational and "how to" sessions (for consortiums, teams, districts, schools).
- I lack the confidence to lead a team. I need to do more reading, take the action plan and organize my thoughts to gain the confidence to lead. Also, I will gain confidence as I use many of the ideas presented in my own area. Thus, as I practice and with time I will be a confident leader in my school and district.
- Authentic assessment.

33. Finally, having attended this conference, please indicate areas that you feel you need to receive additional information in order to accomplish trainer responsibilities-continued.

- I did not realize the hook of being a facilitator for integrated and applied concept until I arrived up here. What a shock! I truly believe in this concept (integrated and applied), but do not believe I am equipped with the knowledge to do the job. I am anticipating mega help from WCTC! At times the days were very long. Almost too saturating!

- I am not aware of any at this time other than continued communication from DPI to support the growth of this concept.

- All in all I thought the conference went quite well. Remind presenters not to read to us.

- Speakers could have given more concrete material. More team work time.

- Because of the nature of the work you wanted to complete, school teams should be required. How much could one person from a school help really. More individuals from each school need training. More team building training, but good trainer with application. Money in our school from tech prep consortium to implement our plan.

- Perhaps an organized social event would have helped the networking process. Since we were here three nights, a buffet, cook-out or some other meal function might have been arranged.

- I feel I need more training in dealing with groups, organizing presentations on the material, and being effective at implementing this. What are some of the tricks of the trade to persuade teachers and administrators to buy into this.

- I feel I need more background on tasks that have worked. Also on task authenticity. There should be some tasks that are evaluated after being used with comments on what works and why, what didn't work and why, how the task could be adapted, etc. Why reinvent the process of inventing the wheel. One of the reasons I think many teachers might be reluctant to integrate or use authentic tasks is because it is not in the book and also its not clear or focused enough for them to see how they would implement and assess the outcomes. The assessment is the area where I feel I would need the most help in fielding concerns of teachers.

- Team building and training. Examples of usable performance tasks.

- Workshops to provide team concept training for those in our district who we want to join our team. Examples of usable performance tasks - not broad 2-4 week projects. Training in assessment techniques. Money to our districts to free up time for teachers to train.

- I need to receive more guided experience developing tasks and becoming familiar with learner outcomes, etc. Also, I am not sure of the state's big plan or "picture."

- Continued communication concerning this effort.

- Ideas/ways to implement program from other districts.

33. Finally, having attended this conference, please indicate areas that you feel you need to receive additional information in order to accomplish trainer responsibilities-continued.

- I need more experience with needs assessment, multi-intelligence and integration techniques. I also need to know more about the WI Developmental Guidance Model. It would be helpful to have a comparison of the NCTM, guidance outcomes, WI learner outcomes, scans and other national education goals.

- We need state's strategic plan. We need consortium people involved with workshops.

- Should have received the action plan early in the conference - a good tool the team could have used. More information on futuristic goals. More information on specific tasks that - success and failure. What other countries are doing in their education system to integrate.

- Process of writing and developing applied/integrated tasks/units. Not enough members from each school were present to write a strategic/action plan. What was covered was only a small part of the overall strategic plan.

- Review DPI model for writing integrated tasks. Structure/organizations for presentations that we would give back in our home districts/consortiums. So that we are not "punting." Broaden scope to include teams from districts so that more effective change and faster change can occur. Many unrelated activities/speakers. . . help us identify how it was to all fit together. Keep up the leadership and the opportunities for these kinds of things.

- Need to have direct training. Instructor to model and walk us through writing a plan.

- The special sessions should be offered for everyone and should have much more time than one hour. The night presentations should be in the day. The days are long and intense and we would like to attend these sessions, but not at night.

- I need help in all areas.

- This conference succeeded in raising my level of frustration and impatience. Few of my questions were answered and little of my "gap of knowledge" was satisfied. If the intent was to prepare me as a trainer, the goal fell well short of the target. I expected to develop and reinforce specific skills and understanding of performance assessment, multiple intelligences, developmental guidance, etc., in order to help train within any district (at the very least), and perhaps within other districts. This did not happen, and apparently, this type of training and preparation will have to occur elsewhere (i.e. within the consortium). On the portfolio side, as in any conference, more was gained in conversations with participants and colleagues. On the whole, too much time was spent on trying to convert the converted and excite and enthused, and not enough on providing us with specific tools and information necessary to get the job done.

- When you can tell me - no, show me - that the people who make the rules and determine the dollars available - the school boards and the superintendents are giving primary attention to school-to-work reform, I will be motivated to continue using 20 years of information on why, how, and when to get the "mountain" moved.

33. Finally, having attended this conference, please indicate areas that you feel you need to receive additional information in order to accomplish trainer responsibilities-continued.

- Please have a follow-up, one-day conference so our team can bring other faculty along. This will help expand the circle, so to speak. Have a computer available for each home team. Have a verbal go around where each home team provides a two minute explanation of their current situation. Get a video tape from DPI of John Fortier's assessment talk for anyone who has not heard it.
- I am a bit muddled about what I will do at school for me and my classes verses what I will/may do in a consortium in a "training position."
- The information I found out about concerning working groups and committees already in place will be very valuable as a place to go and find what I need to feel qualified as a trainer.
- Follow-up conference one year from now to share success and failure stories and ideas for further implementation.
- More information (detailed) on learning styles, needs assessment, multiple intelligence, teaching strategies, integration techniques (Possible workshop in these areas.) Also, a listing of contact people and resources available already.
- We need more multicultural representation and more multicultural direction for curriculum development before too advanced integrated links are made.
- We want another week.
- It would have been a better strategy to explain the outcome of our final day in advance. Had we had the format, we could have revised more effectively. Also, provide computers to word process - that would have been visionary.
- Copies of WI Learner Outcomes. Copies of what other districts are doing.
- It is difficult to answer this before actually getting into it. My district offers classes in the techniques required to accomplish Applied/Integrated Curriculum.
- What was this conference strategic plan/action plan? Create the conference with us in mind. Listing of a vision of trainer responsibilities or sharing what are some of the responsibilities found in other school districts.
- Multi-intelligences, integrating curriculum, data bases on: models, experts, reading lists. Who are we supposed to train-tech school teachers, high school teachers, parents, administrators, school board, all?
- Performance assessment, multiple intelligence, Developmental Guidance/School-to-Work Guidance, Task Development, UW entry level competencies being developed.
- I don't exactly understand what is meant by term "trainer" roles and expectations of this term need to be defined. Does it mean making presentations about information or working with individuals? I truly don't feel I could effectively "teach" this information we received. Help from consortiums would be needed to focus information we bring back to district.

33. Finally, having attended this conference, please indicate areas that you feel you need to receive additional information in order to accomplish trainer responsibilities-continued.

- Follow-up in early fall to see where everyone is and where they are going - what are the needs at that time of the various groups. Have each school (team) provide a small explanative/description of what they are doing at this time - where they are headed.
- Developing the list of sample or model integration activities or classes. Add a conference-wide social activity. Like a bike ride to the creamery or a comedian. (Participants were split into many different places and didn't have an opportunity to network.)
- Clearer information on what exactly conferences are being geared towards (that is, what "step" of the integration process.)
- How do we (I) implement A/I in my school? Where do I start? This is too big for one person (me) in a district the size of mine. How do teachers coordinate prep time, instruction time and evaluate with the present structure of public education? I' m sinking.
- Make sure the funds to support the program do not end before the program is in place.
- Purpose was not clear from the beginning. The agenda explanation in the beginning would have been helpful for understanding.
- Staff awareness, instruction planning for integrated curriculum, administrator awareness.
- I guess I am rather shaky on facilitating still. Beth's stuff was good - I would like more strategies. Also, I would like a session that actually sold (made available) some of the excellent resources on integration and applied tasks. Have more of these - this was fun.
- Very good conference. Took in usable information. Good opportunities to share and learn from other participants. Effective effort to mobilize the group for further action in home districts. Thank you to all.
- Provide our roles up front. Be more clear on what we are to do. Use A/I techniques while doing these presentations. Facilitators should be better - performed.
- We need to learn how to facilitate the other members of our schools and that is what I thought we were going to learn here.
- Selling techniques to fellow educators. Training for administrators (principals). Ways to get more release and flexible schedule from district. Get group together during the year to share frustrations and successes. Encourage districts to pay for extra work.
- We need more time to work with other groups from around the state that are at various stages of planing in particular subject areas. We need ideas, specifically as to what units or activities are successful and meaningful. We need information from DPI specialists as to new curriculum units, activities, resources, and contact people in the area of interest to us (math/tech). We need one organized social event in the early evening or late afternoon so we can get to know other people and get their true input instead of just meeting with those from our team. (By consensus of 10)
- All areas - I am committed but need help.

33. Finally, having attended this conference, please indicate areas that you feel you need to receive additional information in order to accomplish trainer responsibilities-continued.

- Copies of speakers handouts greatly facilitate attentiveness and good listeners - not after the fact.

- Need to get feedback from previous workshops. We attend meetings, listen to lectures, create projects, yet never receive projects back on feedback that we are on the right track. Great information, lectures, structure - it is hard to absorb in four days. Briefer lectures, more handouts and shorter length - 2 days. Very good that our home team could get together and work which was an improvement over February workshop.

- This was an improvement over Stevens Point. It was still lacking in what is really needed for home school implementation, examples of the activities that have actually worked in the classroom including pitfalls and an opportunity to try out the activities from the standpoint of a student. The concept of teaching these principles by example and experience would give a far more effective model upon which to build our own material.

- There was too much lecture and not enough time to work. It would have been better if the speakers would have been available for special help. We would have accessed these people only if we needed their help. Howard Lee had the right idea, he was available for help, but did not lecture.

- More information about teaching strategies in addition to cooperative learning. More information about authentic assessment.

- Implementing - A clear vision of what you expect over the three year commitment from us - I don't like having things sprung on me - I want to know what is expected up front. Please consider the learning style of Right Brain Thinkers.

- Specific training on each of the topics that were presented during this conference. Being sold on this idea was not necessary - we already were. What we needed was more time on specific ways to implement these changes.

- More direction in integrating tasks - targets into the integrated and applied curricula.

- More staff from my district in attendance with me - not just other consortium members.

- Facilitators need to be assigned to each home team. These facilitators had two consortiums and could not help or monitor very well these work sessions. This is a major problem which needs to be addressed. Model good teaching - follow ground rules - start on time - finish on time. My favorites - Jim Bensen - Mike Galloy - Donna Moll. Facilitators would best be high school, tech school, or other people familiar with applied/integrated curriculum and team building skills.

- Authentic evaluation.

- I would like to be kept up-to-date on all decisions that affect this area.

- Bring in fellow staff members from my school district, so that they can start to see vision, to any further conferences. Aid in doing a school district workshop if possible.

- Do it yourself manual "Target and Task" written in understandable terms.

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School participants, speakers and project staff who attended the June 1994 Summer Conference.

Name	School
Dale Koehler	Amery High School
Donna Crain	Amery High School
Jim Martin	Arrowhead High School
Ken Kartman	Arrowhead High School
Ken Reichert	Arrowhead High School
Quentin Cartier	Arrowhead High School
Vern Schaefer	Beloit Memorial High School
Dale Gemignani	Beloit Turner High School
M. James Bensen	Bemidji State University
Hazel Connors	Blackhawk Technical College
Sue Mehlert	Blackhawk Technical College
Darlene Glass	Bloomer High School
Sally Hable	Bloomer High School
Lon Wilson	Bloomer High School
Rita Bitney	Bloomer Middle School
Janet Harvey	Boyceville School District
Helen Jones	Bradford High School
Dorothy McMillan	Bradford High School
Mati Palm-Leis	Bradford High School
Ann Prihoda	Bradford High School
Rita Ruder	Bradford High School
Ronald Moreno	Bradford High School
Linda Cate Dunahee	CESA #10
Leroy Raddatz	CESA #4
Joanne Casey	CESA #5
Thomas Koch	CESA #6
Lyle Martens	CESA #7
Mary Winter	Chippewa Valley Technical College
Candyce Lund	Chippewa Valley Technical College
Margaret Brunn	Chippewa Valley Technical College
Alice Holm	Clinton School District
Michael Morwood	Clinton School District
John Nevins	Crandon High School
Pat Clow	Crandon High School
Lyle Trautmann	Crandon High School
Debra Ison	Crandon High School

Name	School
Karen Sekel	Crandon High School
Kathleen Johnson	D.C. Everest High School
Sue Sinclair	Denmark High School
Jeanne Trousil	Denmark High School
Mary Jane Best-Louther	Department of Public Instruction
John Fortier	Department of Public Instruction
Susan Grady	Department of Public Instruction
Bryan Albrecht	Department of Public Instruction
Mary Jo Hessian	Edgerton School District
Linda Smejkal	Edgerton School District
Barb Gausman	Edgerton School District
Jim Schultz	Edgerton School District
Glenda Maves	Edgerton School District
Nancy Bernstein	Eisenhower High School
Robert Huberty	Eisenhower High School
Jerry P. Hanson	Eleva-Strum School District
Richard Anderson	Elkhart Lake High School
Mark Nevins	Elkhart Lake High School
Charles Svejda	Elkhart Lake High School
Bill Rathman	Elkhart Lake High School
Kay Splittgerber	Florence County High School
Linda Stenmark	Franklin High School
Carol Schuster	Gibraltar High School
Warren Greco	Greendale High School
Patrick Schaekel	Greendale High School
Nancy Pum	Greenfield High School
Lisa Stuckmeyer	Hamilton High School
Monica Schulteis	Hamilton High School
Patricia Wallesverd	Horicon High School
Sara Norton	Horicon High School
Jane Porubcan	Horicon High School
Faye Mohr	Howards Grove High School
Rose Ellinger	Howards Grove High School
Glenys Kraft	Independence School District
Jackie Klar	Juda School District
Carrie Ketchem	Juda School District

Name	School
Trudi Stauffacher	Juda School District
William Ratzburg	Kenosha Unified School Dist. #1
Jerry Berns	La Crosse School District
Gaylene Bradley	Laconia High School
Jeff Holmes	Laconia High School
Beth Dailey	Lakeland Campus-NATC
Marvin Schrader	Lakeshore Tech College/Silver Lake College
Jane Bishop	Lakeshore Technical College
Cindy Peissig	Lakeshore Technical College
Eric Johnston	Lancaster High School
James Prostman	Lincoln High School
Kay Ratajczak	Lincoln High School
Jay Mitchell	Mauston High School
Robert Demeuse	Mauston High School
Jack Hammer	Mauston High School
Don Viegut	Merrill School District
Donna L. Moll	Middleton Cross Plains Area School District
Mary Thibodeau	MidState Technical College
Jim Bonini	Milwaukee Hamilton High School
Ed Kovochich	Milwaukee Hamilton High School
Jeff Klaisner	Monona Grove High School
Paul Rush	Monona Grove High School
Sheila Dahmen	Monona Grove High School
Lisa Lavin	Monona Grove High School
Steve Wendorff	Monona Grove High School
Shari Fairburn Gerou	Mukwanago High School
Janet Waldron	Nathan Hale High School
June Luett	Neenah High School
Mary Lindgren	Neenah High School
Larry Lemmert	Neenah High School
Debra Figueroa	Neenah High School
Jim Gruber	Neenah High School
Jolene Johnson	Nicolet Area Technical College
Lynn Schneider	NorthCentral Technical College
Bonnie Swan	Northeast Wisconsin Technical College
Dennis Scherz	Northwestern High School

Name	School
Steve High	Northwestern High School
Patsy Weaver	Northwestern High School
Pat Luostari	Northwestern High School
Bob Chesney	Ozaukee High School
Fred Casper	Ozaukee High School
Pat George	Prairie du Chien High School
John Meinke	Princeton High School
Bob Brenner	Princeton High School
Ron Stechon	Pulaski High School
Louis Menako	Pulaski High School
Paul Kasprzak	Reuther Central High School
Rita Dosemagen	Reuther Central High School
Loran Hein	Reuther Central High School
Marie Martini	Rhinelander High School
Nancy Crow	Rhinelander High School
Robert Vandenbusch	Shawano High School
Dennis Ketterman	Sheboygan South High School
Laura Taylor	South Milwaukee High School
Kathryn Thompson	South Milwaukee High School
John Cicero	South Milwaukee High School
Howard Kallio	South Milwaukee High School
Nancy Strohbusch	Southwestern Wisconsin Technical College
James T. Shilling	Sparta Senior High
Kay Strouse	Stevens Point Area High School
Jane Menghini	Stevens Point Area High School
Ken Koxlien	Three Lakes High School
Rose Marie Paremski	Three Lakes High School
Jo Ann Hennessey	Three Lakes High School
Kathleen Leis	Trempealeau Valley Coop
James Jorsch	Tremper High School
Chuck Bouthilet	Unity High School
Daniel Beck	Unity High School
Larry Rubin	University of Wisconsin System
Stephen Kurth	UW-Eau Claire
Myron Eighmy	UW-Stout
Mike Galloy	UW-Stout

Name	School
Alan Gilbertson	UW-Stout
Howard Lee	UW-Stout
Orville Nelson	UW-Stout
Linda Riley	UW-Stout
Ken Welty	UW-Stout
Carol Mooney	UW-Stout
Len Sterry	UW-Stout
Sherri Johnson	UW-Stout
Hector Cruz	UW-Stout
Ed Biggerstaff	UW-Stout
Dutch Van Den Heuvel	UW-Stout
Melissa Freiberg	UW-Whitewater
James Edwards	Waterford Union High School
Mike Schmitz	Waterford Union High School
Sally Neeb	Waukesha County Technical College
Francene Ozbun	Waukesha North High School
Craig Myers	Waunakee High School
Paulette Emberson	Waunakee High School
Jerry Redman	Western Wisconsin Technical College
Kerry Hogan	Western Wisconsin Technical College
Anne Goode	Whitnall School District
David Hartung	Wisconsin Indianhead Technical College
Gene Rosburg	Wisconsin Indianhead Technical College
Gabrielle Wacker	Wisconsin Technical College System
Mark Johnson	Wisconsin Technical College System
James Urness	Wisconsin Technical College System

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Wisconsin

Integrated and Applied Curricula Project

Department of Public Instruction/Wisconsin Technical College System

In Cooperation with the Center for
Vocational, Technical and Adult Education,
at the University of Wisconsin-Stout

UW-STOUT
Menomonie
Wisconsin

Issues this Certificate on
June 23, 1994
to

In Recognition for Participation at
the Integrated and Applied Curricula Conference at
the University of Wisconsin-Stout on June 20-23, 1994

Mike Galloy, Project Director

APPENDIX B

Wisconsin

Integrated and Applied CurriculaWorkshop

February 2-3, 1994: Stevens Point
February 15-16, 1994: Madison

Sponsored by :

Wisconsin Department of Public Instruction

Wisconsin Technical College System

In Cooperation with the Center for
Vocational, Technical and Adult Education,
at the University of Wisconsin-Stout

UW-STOUT
Menomonie
Wisconsin

INTEGRATED/APPLIED CURRICULA

Goal of Conference

This conference is designed to teach participants how to begin using authentic instructional tasks so that students perform well on Wisconsin's new performance based assessments, as well as be successful in work and life. Doing so will require students to integrate and apply various skills, knowledge and processes to master 17 learner outcomes.

Objectives

Participants will:

- understand what the 17 learner outcomes are.
- understand how the learner outcomes will be used as the basis for Wisconsin's performance based assessment system and educational restructuring.
- learn what good authentic instructional tasks are.
- learn how to develop good instructional tasks for use in the classroom.
- begin how to learn to construct informal classroom assessments to determine if students are achieving the 17 learner outcomes.

WORKSHOP ACTIVITIES
PROCESS STEPS

ACTIVITY I--Teams of 2, discipline specific.

Facilitators for this activity are selected TPLG Work Team Members and State Staff.

1. Select a specific learner outcome. This will help to focus your task.

2. Identify discipline specific skills and knowledge (enablers) that students must demonstrate to achieve outcome.

3. Develop authentic tasks that students will engage in to accomplish the learner outcome. Beware of novelty or "busy work" types of activities.

4. Share and receive feedback from other teams at your table. Exchange task development sheets and help each other to focus on authenticity and learner outcome.

5. If teams or individuals have questions, write them down on one of the notecards on the table and give it to a facilitator to pass to presenter.

6. Presenter will answer questions and review selected tasks.

ACTIVITY II--Home teams.

Facilitators for this activity are those from above. Additionally, Tech Prep Consortium district leaders, secondary and postsecondary, will facilitate the developmental process in their respective home districts.

1. Select a specific outcome.

2. Identify primary enablers (those most significant) that students must be able to demonstrate in order to accomplish outcomes.

3. Develop a work oriented task that integrates academic enablers with vocational enablers.

4. Develop an academically oriented task that integrates vocational enablers with academic enablers.

5. Share and receive feedback from another team at your table. Exchange task development sheets and help each other focus on authenticity and learner outcome.

6. If teams or individuals have questions, write them down on one of the notecards on the table and give it to a facilitator to pass to presenter.

7. Presenter will answer questions and review selected tasks.

ACTIVITY III--Home Teams.

Facilitators for this activity will be the same as those in previous activity.

Repeat steps 1-7 as in **ACTIVITY II**. Incorporate the following as the presenter unveils additional information.

1. Focus on the reality of the task. Can this task really be used in the classroom? Is their an authentic connection between this task and the realities of work and life?

2. Define implementation strategies that can be used in your home school environment. Are there constraints that must be considered (facilities, time periods, schedules...)? Can the task be completed in a reasonable amount of time (2-3 days)?

3. Begin to develop performance based assessment procedures that will allow students to demonstrate their ability to achieve the outcomes.

4. Share and receive feedback from another team at your table. Exchange task development sheets and help each other focus on authenticity, implementation strategies and assessment.

5. If teams or individuals have questions, write them down on one of the notecards on the table and give it to a facilitator to pass to presenter.

ACTION PLAN & DEBRIEFING--Individuals and home teams.

Primary facilitators will be the Tech Prep consortium district leaders from previous activities.

1. Begin to **plan activities** that you will do when you return to your home school. The suggested plan will help focus on some activities you can do. Feel free to expand or modify these activities as needed.

2. **Schedule meetings** with your integration partners, in home schools or other schools in your district. School reform can be most effective when it begins at the grassroots level. That's you and your partners!

3. **Review Mini-Grant proposal**. Meet with your home teams and brainstorm ideas how the money can be most effectively used for integration.

4. Brainstorm ideas for **follow up activities** and pass them along to your Tech Prep Director. Remain involved in consortium wide planning for future activities.

5. Plan to attend the **June workshop, June 20 -24, 1994 at UW- Stout.** It will build off of the activities conducted between now and then.

Welcome to the Applied/Integrated Curriculum Conference

Within your conference folder, you should find the following:

1. Name Badge
2. Agenda
3. "The Big Picture - Putting the Pieces Together"
4. "Targets and Tasks"
5. "Instructions for Using Task Development Record"
6. "Task Development Record"
7. Conversations over Dessert: "Linking School-to-Work Transition with Other Epochal Changes"
8. "Follow-up Activities/Personal Action Plan"
9. "Small Grant Application" Package
10. "Food/Lodging/Travel Reimbursement Information"
11. "Travel Expense Form"
12. "DPI Clock Hour Form"
13. "Conference Evaluation Form"
14. "Notepaper"

If any of the above are missing from your folder, please ask a facilitator for the information or inquire at the registration desk.

Applied/Integrated Curriculum Workshop

February 2-3, 1994 **Holiday Inn-Stevens Point, WI**

February 2 **Wednesday**

7:00 - 8:30 a.m. **Registration /Breakfast Buffet** (provided by conference)

8:45 a.m. **Welcome and Introductions** (Mike Galloy, UW-Stout)

- Introduction of Guests and Participants
- Overview of Project
- Intent of Workshop
- Expenses paid by project

"Putting The Pieces Together" (Mary Jane Best-Louther, DPI and Kathleen Paris, Leadership Institute, UW-Madison)

- Background Information
- Connection to Other Initiatives
- State Vision

Target and Tasks (John Fortier and James Moser, DPI)

- Learner Outcomes
- Educational Targets
- Authentic Tasks and Enablers

Break -Groups should continue with activity during break period. Coffee, Tea, Juice. provided.

Group Activity 1

- Authentic Task Development (Grouped by Discipline)

12:00 **LUNCH** (provided by conference)

1:00 p.m. **Group Activity 2**

- Authentic Task Development (Work in Interdisciplinary Groups)
- Focus on Specific Outcome

Break-Coffee, Tea, Soda available.

Group Activity 3

- Authentic Task Development (Work in Interdisciplinary Groups)
- Focus on Any Outcome

4:00 p.m. **Recap of Activities**

4:30 p.m. **Reception** (Cash Bar)

5:30	**Banquet** (provided by conference) "Applied and Integrated Curriculum within School to Work Transition" Presenter: Kathleen Paris, Director, Leadership Institute for School to Work Transition, Center on Education and Work, UW-Madison
February 3	**Thursday**
7:00 - 8:30 a.m.	**Breakfast Buffet** (provided by conference)
8:30 a.m.	**Group Activity 3 Continues** **Break** -Groups should continue with activity during break period. Coffee, Tea, Juice. provided. **Group Activity 4** (School Teams work Together) •Authentic Task Development, Implementation and Assessment •Focus on Tasks that will be Implemented in Succeeding Months
12:00	**LUNCH** (provided by conference)
1:00 p.m.	**Group Activity 4 Continues** **Break** -Groups should continue with activity during break period. Coffee, Tea, Soda provided.
3:00 p.m.	**Summary** •Assignments •June Workshop •Small Grant Application •Travel Expense Forms •Evaluation Form

NOTE: Travel Expense Forms must be completed and turned in prior to departure. If you must depart prior to the end of the conference, please contact Alan Gilbertson so the forms can be completed and checked for accuracy.

Applied/Integrated Curriculum Workshop

February 15-16, 1994 **Sheraton Inn, Madison, WI**

February 15 **Tuesday**

7:00 - 8:30 a.m. **Registration /Continental Breakfast** (provided by conference)

8:45 a.m. **Welcome and Introductions** (Mike Galloy, UW-Stout)
- Introduction of Guests and Facilitators
- Overview of Project
- Intent of Workshop
- Expenses paid by project

"Wisconsin Learner Goals, Outcomes, Assessment"
(Sue Grady, DPI)
- Educating students for success in the 21st Century

Target and Tasks (John Fortier and James Moser, DPI)
- Learner Outcomes
- Educational Targets
- Authentic Tasks and Enablers

Break -Coffee, Tea, Juice provided.

Group Activity 1: Authentic Task Development
- Grouped by Discipline in Groups of 4-5
- Determine Enablers that relate to the Outcomes

12:00 **LUNCH** (provided by conference)

1:15 p.m. **Recap Group Activity 1**

Group Activity 2: Authentic Task Development
- Work in Home Teams
- Use enablers identified in Activity 1 to develop integrated tasks
- Focus on Specific Outcome

Break-Coffee, Tea, Soda available.

Recap of Day's Activities

4:15 p.m. **Adjourn**

5:45 p.m. **Banquet**

Conversations Over Dessert: "Linking School-to-Work Transition with Other Epochal Changes" (Kathleen Paris, Director, Leadership Institute for School to Work Transition, Center on Education and Work, UW-Madison)

February 16	**Wednesday**
7:00 - 8:30 a.m.	**Continental Breakfast** (provided by conference)
8:30 a.m.	**Group Activity 2 Continues**
	Recap of Group Activity 2
	Group Activity 3: Authentic Task Development •Work in Home Teams •Assessment •Focus on Reality/Authenticity •Develop Implementation Procedures
	Break -Groups should continue with activity during break period. Coffee, Tea, Juice provided.
	Group Activity 3 Continues
12:00	**LUNCH** (provided by conference)
1:00 p.m.	**Group Activity 3 Continues** •Integrate Action Plans •Follow-up Activities
	Break -Groups should continue with activity during break period. Coffee, Tea, Soda provided.
	Recap Group Activity 3
3:00 p.m.	**Summary** •Assignments •June Workshop •Small Grant Application •Travel Expense Forms •Evaluation Form

NOTE: Travel Expense Forms must be completed and turned in prior to departure. If you must depart prior to the end of the conference, please contact Alan Gilbertson so the forms can be completed and checked for accuracy.

THE BIG PICTURE - PUTTING THE PIECES TOGETHER

A Presentation to the statewide Integration Conferences,
February 1994

Mary Jane Best-Louther
WI Department of Public Instruction
Tech Prep Consultant

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Kathleen A. Paris, Ph.D.
Director
Leadership Institute for
School to Work
Transition
U. W. Madison
School of Education
1025 West Johnson Street
964 Educational Sciences
Madison, WI 53706-1796
(608) 263-9592

Historical Perspective and the Big Picture (Putting the Pieces Together)

- How we got here - The Big Picture.

  a) WI Educational Goals
  b) Learner Outcomes
  c) Enabler Project
  d) WI Student Assessment System
  e) Connecting The Curriculum Project
  f) The Tech Prep Initiative
  7 Essential Elements

- Where are we going?

  Discussion of the School-To-Work Legislation

- Common Elements Across Reform Efforts

  a) Increased expectations for ALL students
  b) Access to integrated curriculum
  c) Courses taught using applied methodologies
  d) Sequential course of study based on career goals
  e) Access to work-based learning options

- Why Applied and Integrated Curriculum?

- Questions/Comments/Concerns.

Why Applied and Integrated Curriculum?

Kathleen A. Paris, Ph.D., Director
Leadership Institute for School-to-Work Transition
Center on Education and Work
School of Education, UW-Madison

1. Students need better, more rigorous academic preparation for postsecondary technical education, especially in science and math.

2. Brain research shows that learning occurs best in a context we already recognize.

3. The laborforce needs different skills than those traditionally developed in schools. (All workers need to be thinkers and doers. Thus leadership, teamwork, problem-solving and communications abilities are required at all levels of the organization.)

4. For information to be useful, students need to be able to apply what they know to life situations.

5. Academic disciplines are artificial distinctions that necessitate teaching of fragments. The more connections students can see between one class and another, the greater the reinforcement and the greater the likelihood that learning will occur.

6. Howard Gardner (*Frames of Mind*, 1993) has identified 7 intelligences: linguistic, musical, logical-mathematical, spatial, bodily-kinesthetic, and personal intelligences (intrapersonal and interpersonal). Gardner points out that schools typically reinforce and reward linguistic and logical-mathematical intelligence.

We waste human intelligence and human resources by neglecting the other intelligences and creating situations that virtually assure failure for a large group of students.

5. Applied/integrated curriculum should help almost all students learn more effectively and offers teachers an opportunity to find teaching more interesting and enjoyable.

TECH PREP IN WISCONSIN

October 1993

The intent of this information is to provide a framework for the Tech Prep Initiative within the State of Wisconsin. It should enable school personnel to clarify Tech Prep and connect those activities with the many other initiatives they are currently working toward.

Tech Prep is part of a larger School-To-Work Transition Initiative which is intended to enable all students to make a smoother transition into post-secondary education or careers by choosing a path which will lead them to work, to a technical college, to an apprenticeship, or to a four-year college. In particular, the purpose of Tech Prep is to restructure educational opportunities (i.e. the sequence of courses and experiences a student may select, beginning in high school and extending through grade fourteen) to provide the academic and technical competencies students need to successfully pursue a specific diploma or associate degree program in a technical college after high school graduation.

The following are characteristics of Tech Prep and will be found whenever this option is available for students:

- courses and experiences to help students systematically explore their interests, options, skills and values and to use what they learn about themselves to establish career goals and the plans to achieve them;
- curricular changes which will establish school-based, and work-based learning sequences from grades eleven through fourteen, including the skills and abilities needed by competent workers in the high performance workplace of the 21st century;
- cooperative planning, coordination and links with the technical college system in order to reduce the need for remediation and eliminate delays, duplication of courses or loss of credit as students pursue technical education beyond high school.

Key areas of Tech Prep within local districts are:

- Curriculum - Tech Prep acknowledges that all education must be based on a solid academic foundation. It includes a strong common (basic skills) core of vocational education, mathematics, science, social studies, and communication. An emphasis needs to be made to connect the curriculum with a student's learning style. One method of helping students to make those connections is to develop curriculum based on the SCANS competencies. Curriculum development needs to be applied and integrated throughout a students educational experience.

- Partnerships - The Education For Employment Initiative started many strong partnerships among business, industry and education. This is a foundation piece for Tech Prep. Active business partnerships are critical to the success of Tech Prep. We need to work with business and industry as we move toward helping students and teachers develop real world applications within and across the curriculum. Strong partnerships are necessary for all work-based programs.

- Counseling - Students need a clear goal to focus on during their educational experience. In order to accomplish this they will need access to a developmental guidance model that includes active career awareness and experiences. Counselors alone cannot deal with students career interests. All teachers must develop an advising approach to helping students meet their career goals. Students will need developmental experiences that will allow them to make responsible choices to fulfill their career goals. All staff will need solid and up-to-date information regarding the world of work and the School-To-Work Initiative.

Recently, the Federal Legislation identified seven elements that are essential to Tech Prep. These seven elements could be considered a guideline when evaluating Tech Prep within your district. They are;

- Articulation Agreements - Does your district work with the local Vocational/Technical College to develop articulation agreements for all possible courses. If these articulation agreements are in effect, are they being utilized by all students?

- Appropriate Curriculum Design - Curriculum mapping has taken place in many school districts throughout the State. This process maps a students course work for a chosen career cluster from 9th grade through the diploma or associate degree program.

- Curriculum Development - Integrated and applied curriculum projects are being developed throughout the State. Some of these projects are national curriculum like the CORD material and some of these are specific to a particular district. The Department of Public Instruction has a listing of all integrated and applied curriculum projects throughout the State. This document also gives resource contacts within each of those districts.

Tech Prep curriculum development includes the following elements:

- teachers, administrators, parents, and the community must be aware of the current beliefs, attitudes, and practices that are no longer viable;
- academic subject matter must be examined and updated to ensure that content has abundant application to the "real world";
- the curriculum of academic and vocational subjects must reinforce each other so that students are better able to make intellectual connections between what they learn in various courses;
- all learning styles must be accommodated through cooperative learning, student participation in classroom planning, problem-solving and active exploratory learning.

- Joint In-Service of Staff Members - It is apparent that all faculty will need extensive staff development opportunities to facilitate Tech Prep. Attention should be given to connecting staff development activities with the Tech Prep and School-To-Work Initiatives. Staff, administration, students, parents, and the community should be receiving the same message.

- Counselor Training - Counselors are a critical link to students future career planning. It is imperative that counselors have up-to-date career information. Student career planners are now being developed by members of the Tech Prep Leadership Group. These planners will be ready to present at the counselor conferences in January of 1994.

- Equal Access For Special Populations - Students with disabilities must have access to all educational opportunities including Tech Prep. All students should be part of Tech Prep and School-To-Work opportunities.

- Preparatory Services - Students will have access to any services necessary to prepare them to participate in Tech Prep opportunities. School Districts need to provide prepatory services for all students.

In summary, Tech Prep is part of the School-To-Work Initiative. Tech Prep should be connected with Wisconsin's Educational Goals, The Gateway Assessment, Education For Employment, The Developmental Guidance Model, School based learning and Work based learning opportunities offered within schools, the Districts' Strategic Plan, and The Youth Apprenticeship Initiative. For further information please contact the Tech Prep Consultant, Mary Jane Best-Louther at the Department of Public Instruction (608) 267-3161.

Targets and Tasks

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Abstract

The authors argue that there are important differences among types of educational targets. Imprecise use of target terminology leads to an understandable cynicism about the direction of education. They suggest that defining the relationship of targets to one another and reconceptualizing the currently popular term "outcome" can give meaningful direction to educational programs. As redefined, outcomes are complex human behaviors that transcend disciplines but which may be contextualized within a variety of those disciplines in the form of authentic educational tasks.

Curriculum, instruction, and assessment must shift their focus from children's learning about taxonomies of isolated, discipline-specific enablers (competencies, basic skills, behavioral objectives) to sequences of authentic educational tasks in which such enablers are integrated and applied. The tasks would yield products, performances, and/or processes that could be assessed to confirm students' achievement of targeted outcomes. Authentic tasks are those that replicate or simulate tasks commonly met after completing formal education. They incorporate what research tells us about how children learn.

Finally, the authors discuss the implications of such a reconceptualization of educational targets upon curriculum, instruction, and assessment.

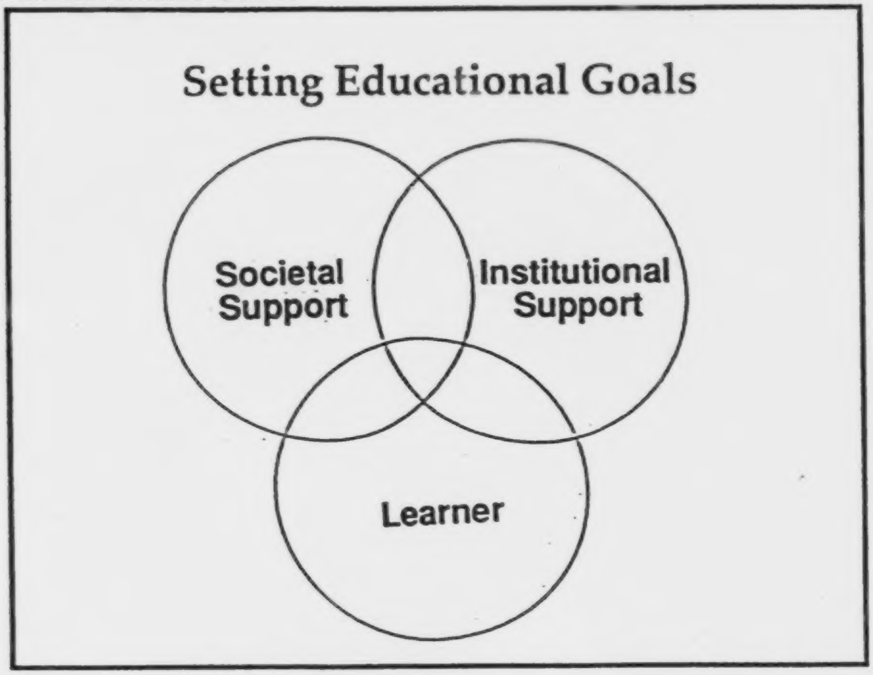
In the early 1980s *A Nation at Risk* and other critiques initiated an on-going look at American education. Since then, we have examined various solutions to such signs of trouble as decline in ACT/SAT scores, employer dissatisfaction with readiness of their employees for work, and less than favorable comparisons with students from other nations on international assessments. Even after ten years, considerable dissatisfaction remains.

We acknowledge the considerable help of Beau Fly Jones of the North Central Regional Educational Laboratory and of colleagues at the Wisconsin Department of Public Instruction, who read earlier versions of this paper and made useful suggestions.

Goals

Whatever is wrong with American education, it is certainly *not* a lack of educational goals. Every school district, state, educational institution, and organization has a set of educational goals, most of which do not vary much from one another. But, educational goals are not all the same. They differ in who formulates them, who implements them, who or what is affected by them, and the immediacy of their impact on the classroom. They fall into three major categories (see Figure 1).

Figure 1 Educational Goals



Societal Support Goals ensure that students will have the necessary foundation to learn. They include such things as adequate health care, adequate funding for education, proper nutrition programs, and a drug-free environment. Societal goals have significance beyond education. They are not in control of the educational community but rather of the political one. Still they have an important, though indirect effect on children's learning. If children are not properly nourished or in good health, they will find it difficult to learn.

Institutional Support Goals have to do with the learning environment. They include such things as safe buildings, adequately prepared teachers, sufficient teacher planning time, and appropriate materials. These goals are still largely in control of policy makers at the educational policy level--school districts, state departments of education, and school administrations. They are important to student learning, but somewhat indirectly.

Learner Goals refer to our expectations for students and directly affect what goes on in the classroom. The vehicles for reaching these learner goals are curriculum, instruction, and assessment. These three components of education are largely under the direction of education professionals--administrators, curriculum coordinators, teachers, and assessment specialists. Learner goals directly affect what goes on in the classroom.

What should students know and be able to do as a result of their time in the educational system? This paper addresses this latter set of goals.

Educational Targets

At different times educators have characterized what students should know and be able to do as goals, objectives, competencies, basic skills, and, most recently, outcomes. Cynics among us are likely to believe that the newest term is merely a buzz word identifying something that we have always known under one name or another. Many of us remember "goal centered" education, "behavioral objectives," "basic skills," and "minimum competencies" and are tempted to view outcome-based education as just another name for these earlier movements. And yet, like educational goals, learner goals are not all the same.

Each of the above movements had a slightly different focus. Unfortunately not everyone defined any of the terms consistently and no serious attempt was ever made to relate the various terms to one another. Because of the confusion caused by proliferating terminology, we begin this paper by referring to all statements about children's learning as "educational targets," a term which carries none of the baggage associated with the other terms. Educational targets are statements about what we want education to provide for our students. They represent things that the educational system strives to achieve. They give direction to curriculum, instruction, and assessment.

Educational targets, like educational goals, are not all the same. By using many terms for educational targets, educators tacitly recognize those differences but fail to distinguish them consistently, to establish their relationship to one another, or to show their relevance to meaningful educational tasks. Treating outcomes in this same unstructured way could result in a very useful concept losing its power to give sensible direction to educational reform.

The purposes of the paper and the model that it introduces are to

- show that "outcome" is not simply another label for all existing educational targets;
- define the concept of learner outcomes clearly enough to make it useful;
- establish the relationships among various kinds of educational targets and their relationship to authentic educational tasks; and
- consider the implications of this conceptualization of outcomes and tasks on curriculum, instruction, and assessment.

Outcomes

Educators are currently calling most educational targets "outcomes." Virtually everyone is talking about outcome-based education. Unfortunately, not everyone defines outcomes in the same way. Some regard them as rather well-defined, isolated, discipline-specific targets, not unlike so-called basic skills or behavioral objectives (for example, "adds single digit numbers"). In that view, the achievement of outcomes becomes associated with the concept of mastery learning. Others look at outcomes in a somewhat larger sense as things that students can do as a result of education, not unlike the competencies of competency-based education (for example, "can write clear, conventional prose"). Still others think of outcomes even more broadly as characteristics describing the satisfactorily educated student (for example "employability"). Lists of outcomes often include targets at each of these levels, as shown below:

Table 1 **Some Identified "Outcomes"**

- Practice environmental stewardship
- Exhibit citizenship
- Read and understand written materials
- Organize an introductory message in topical order
- Compare and contrast US political and economic systems with those of other countries
- Analyze
- Exhibit computer literacy
- Use mathematics to solve problems
- Allocate resources
- Use algebraic processes
- Learn new skills
- Demonstrate facility for social interaction

Quite obviously these "outcomes" are not all the same; indeed, they differ in several ways. The first is their degree of generality. "Citizenship" is a much broader target than "organize an introductory message in topical order," which may be the target of a single classroom lesson. They also differ in their relationship to specific school subjects. "Comparing and contrasting economic systems" is clearly seated in economics. On the other hand,"analysis" is important across disciplines. Some of the outcomes subsume others. "Practice environmental stewardship" is part of "exhibit citizenship," and "use algebraic processes" is a subset of "use mathematics to solve problems."

Some of the proposed "outcomes" are relatively easy to assess, while others are more difficult. One can develop efficient tests of a student's ability to "use algebraic processes" but is truly challenged to assess "exhibit citizenship." Finally, the outcomes vary according to who formulates them. "Exhibit citizenship" and "demonstrate facility for social interaction" often appear on lists of national or state goals. They are identified by relatively high-level policy makers. Targets like "organize an introductory message" or "compare and contrast political systems" tend to be formulated by education professionals such as teachers and administrators. None of these differences among educational targets are insignificant.

There are three main kinds of educational targets on the above list of outcomes: learner goals, attributes, and enablers.

Learner Goals

Learner goals are the most general educational targets, broadly characterizing learners by identifying desired traits. To a great extent they are neither time- nor culture-bound; they are desirable at any time and in any location. They are usually identified by policy makers at state and district levels and are the means by which policy makers speak to educators about what they expect from education. After input from individual citizens, educators, and school boards in each of the state's 12 cooperative educational service agencies, the Wisconsin Goals Panel has identified ten learner goals (see Appendix A). They may eventually be approved by the legislature. Three of them are:

- Be a responsible citizen.
- Be prepared for productive work.
- Develop aesthetic awareness.

Attributes

Attributes are characteristics of learner goals that answer logical questions one might have about those goals. What makes a person prepared for productive work? How do we know that a person has physical and emotional wellness or is a responsible citizen? Attributes are still abstract but are somewhat more observable than learner goals. They are usually time and culture bound; for example, what made a person prepared for productive work in 1944 does not do so in 1994. A person's employability in an emerging culture with a labor-intensive economy does not make that same person employable in a highly technological economy. Attributes are determined by various forces within one's culture, such as employers, family, religion, or social environment.

Since we live in a diverse culture, individual perceptions of the attributes of a given learner goal may vary across communities or even within them. Because they are viewed differently by different people and often involve attitudes and values, some people believe that attribute development should be the responsibility of the home and church rather than the school.

Attributes often apply to more than one learner goal. "Work well with others" may be an attribute associated with being prepared for productive work, but it may also characterize responsible citizenship. Other attributes of being prepared for productive work might include "understand systems," "manage resources effectively," or "act reliably."

Enablers

Enablers include all educational targets which enable students to do educational tasks. Some enablers are discipline-specific (such as the knowledge bases of the various subjects); others are cross-disciplinary.

Knowledge-base enablers. Educators often divide human knowledge into various domains or disciplines. As the knowledge base grows exponentially, the disciplines become more and more specialized and fragmented. Science becomes physics, chemistry, biology, geology, and so forth. Biology, in turn, becomes botany and zoology. One can identify a content taxonomy in any discipline. Such taxonomies typically include facts (significant data), concepts, reified processes, vocabulary, and values peculiar to the discipline. Students need the knowledge base of a discipline to do tasks seated in that discipline.

Cross -disciplinary enablers. Other enablers are cross-disciplinary, and students must have control of them in order to perform tasks in any subject. They are the means by which we manipulate and communicate the knowledge bases. Such enablers are thinking processes, communication procedures, and quantification and technology skills. These enablers can take on somewhat different characters within different disciplines. A synergism exists between them and the knowledge-base enablers.

Thinking Processes. Thinking processes allow us to manipulate knowledge base content. Although applied differently in different contexts, they can be thought of individually by looking at the characteristics they share across disciplines. For example, we understand that "analysis" may be implemented somewhat differently in different subjects, but it also combines certain more basic thinking operations (perceiving, discriminating, inferencing, predicting) in all contexts. Some other thinking patterns include concept development, principle formation, and decision making. (For a more thorough treatment of thinking processes, see Marzano et al. 1988)

Communication Procedures. Communication procedures allow us to record and share the results of our mental manipulation of the knowledge bases as well as the knowledge bases themselves. Vicarious learning in any discipline requires a certain level of competence in communication. Shared symbol systems such as language, numbers, and nonverbal expression make communication possible. Unfortunately, education has failed to recognize that, like thinking processes, communication procedures are essential to success in learning any subject matter. Instead, we have mistakenly enshrined language enablers such as writing, reading, speaking, and listening in their own discipline (along with the fine art of literature, the science of linguistics, and the skill of research). This peculiar construct we have labeled "language arts" and deliver it in the discipline of English and/or speech. To some extent a similar phenomenon has restricted computation to mathematics.

Quantification Skills. Although quantifying usually suggests using only numbers in a variety of ways, this category also includes those mathematical skills associated with geometric and spatial notions. Some examples are application of number and operational sense; analysis and symbolic representation of algebraic, numerical, spatial patterns; use of data analysis concepts and processes; and application of the concepts of randomness and chance.

Technology Skills. Life and work in the 21st century will demand familiarity as well as some degree of expertise not only with the technologies currently existing but also with those yet to be invented. Being able to use appropriate technology to solve problems and to improve one's quality of life involves more than just using some sort of equipment. One has to "communicate" with the technology by providing appropriate inputs and interpreting relevant outputs.

Enablers: The Current Focus of Education

As they have been in the past, enablers are the current focus of education. Curricula consist of elaborate taxonomies of knowledge, thinking processes, and communicative skills expressed as objectives to be introduced, mastered, practiced, and reviewed, often in isolation as if they were ends unto themselves. Targets that educators have called competencies, basic skills, and behavioral objectives are really different taxonomic levels of these enablers. Competencies are at a fairly high level of generalization: "can write using acceptable conventions" or "can solve problems using mathematics." Basic skills are more focused and specific: "writing business letters" or "subtracting." Behavioral objectives are still more specific: "uses commas correctly" or "subtracts single-digit numbers." Test makers exacerbate the decontextualization of knowledge and skills in standardized, norm-referenced, multiple-choice assessments. Educators must begin to instruct and assess through tasks which authentically integrate the various enablers.

For the most part, society entrusts the identification of these important targets to the educational community. However, a community's conception of attributes will also influence the perceived value of enablers. For example, if a community regards environmental stewardship as an important attribute of citizenship, knowledge-base enablers in environmental science will likely receive emphasis in that community's schools.

EDUCATIONAL TARGETS

Learner Goals

Attributes

Enablers

The list of "outcomes" that was introduced and discussed earlier in the paper contains targets in each of the three categories in the above figure.

Learner Goals:
- Exhibit citizenship
- Demonstrate facility for social interaction

Attributes:
- Practice environmental stewardship
- Allocate resources
- Learn new skills

Enablers (at various taxonomic levels):
- Read and understand written materials (communication)
- Organize an introductory message in topical order (communication)
- Compare and contrast US political and economic systems with those of other countries (knowledge base and thinking process)
- Analyze (thinking process)
- Exhibit computer literacy (technology skill)
- Use mathematics to solve problems (quantification skill)
- Use algebraic processes (quantification skill)

Outcomes: The Missing Educational Target

The gap between attributes and enablers in above figure is intentional. The first two categories of educational targets are not only rather broad but also carry a high affective load. In other words, achieving them depends upon attitudes, values, and beliefs as well as the mastery of sufficient enablers. That fact makes them elusive to assess. American educational practice prides itself on grading students only on what they have learned (that is, the enablers of the various disciplines). We place our lofty learner goals and attributes in philosophy statements, put those statements on a shelf, and get on with the real business of education: the enablers.

Students often do very well in achieving enablers. They earn their required Carnegie Units and achieve respectable grades in subject-matter classes. Unfortunately, owing to the isolated handling of enablers and the nature of favored assessment instruments, educational practice too frequently focuses on what children know rather than on what they can do with what they know. Far too often, students graduate unprepared for productive work, responsible citizenship, or aesthetic awareness--in sharp contrast to what was confidently imagined they would be when the goals were initially framed.

Thus, we must conceive of another kind of educational target (Learner Outcomes) to fill the gap between learner goals and attributes at one end of the spectrum of educational targets and enabler taxonomies at the other end.

> **Learner Outcomes** are complex human behaviors that involve integrating many and different kinds of enablers as they are applied to the completion of real tasks.

An outcome in this sense is a generic statement about a learner that transcends specific disciplines. It becomes teachable and assessable by being contextualized in tasks within one or more disciplines. An outcome must be broad enough to give some evidence that students are acquiring the attributes of learner goals *and* to require integration of a number of enablers. At the same time it must be narrow enough to be reasonably assessable.

Educational Tasks

This conception of outcomes is meaningless without careful consideration of the nature of the educational tasks upon which it rests. Being generic, an outcome should be relevant in a number of different disciplines. In order to teach or assess the outcome, it must be contextualized in a task. This task might be set in any one of several disciplines or be cross-disciplinary.

The tasks associated with outcomes have certain important characteristics. Like outcomes themselves, they must be broad enough to draw upon knowledge-base or cross-disciplinary enablers. They must parallel something that students will want to do or be expected to do in the future. Given that many, if not most, instructional and assessment tasks will be undertaken within the school setting, it is unrealistic to demand that all be "real-life" or authentic. Ideally they will be, but it is likely that some will be simulations of real-life tasks or will be seated within the intellectual reality and structure of a subject-matter discipline.

A protracted example of a Learner Outcome and some related contextualized tasks are given in the following examples. Although just one outcome is considered, it is important to note that a particular contextualized task could relate to other outcomes not stated here.

Outcome: Revise a product, performance, system, or idea in response to relevant information.

Task 1 Although set mainly in agriculture, this task has a strong interdisciplinary flavor. It is in the form of a long-term project to be carried out by secondary students in a group setting. As such, it is primarily instructional in nature.

Recent settlers in Wisconsin from Southeast Asia are predominantly farming families. Climate differences make it difficult for them to practice their livelihood. You are part of a group formed to advise them about which of their crops might transfer to the new setting (and under what conditions) and to recommend alternatives for those which cannot. Research this topic and propose a program for sharing this information, taking into consideration possible communication barriers.

Task 2. This task is set in science and is relatively accessible to students in a wide range of grades. It could be done either individually or in a small group.

Imagine you have been hired as an engineer for a packaging company. Your task is to create a package to transport eggs of endangered birds.

Design and construct a container from five sheets of typing paper and one meter of masking tape that will protect a raw egg from a drop of at least one meter.

The container must be constructed so that the egg can be removed after each test and checked for cracks.

Task 3. This task is aimed at language arts students. It can be done by a student working alone and might take no more than three class periods.

How do we learn what people are *really* like?

Try a little experiment. Bring to class a tape-recorded copy of a song you really like. Place the tape in the class music box. Each student will choose a tape from the box. After having listened to the tape you chose, write a description of the person who brought in this tape and who would enjoy it. This description might include the person's

- interests, such as hobbies and use of leisure time
- beliefs and attitudes
- physical appearance and dress

Then, interview the person who actually brought the tape to find out the degree to which the person matches your written description.

Finally, write another paper in which you compare and contrast the original description and the results of the interview.

Task 4. This mathematics task has been specifically designed to be used in a statewide on-demand performance assessment. The expectation is that a student could prepare a response in one class period or less.

Rent a Car

Sally is on vacation and plans to rent a car. Here are her options:

Rent-a-Wreck: $15.95 a day plus 19¢ a mile
Lemons for Hire: $18.50 a day plus 16¢ a mile

Describe in detail the solution method(s) you would use to solve the following problem:

- How many miles would Sally have to drive to make the Lemons for Hire the more economical choice?

[No credit is given for solving the problem. REPEAT! Just describe the method you would use to solve it.]

[Space for work.]

Now suppose the rent-a-car conditions were changed as follows:

Rent-a-Wreck: $15.95 a day plus 19¢ a mile, but the first 100 miles are free.
Lemons for Hire: $18.50 a day plus 16¢ a mile, but the first 50 miles are free.

Would the method(s) you described for the first problem have to be changed in order to solve this problem?

If you answer NO, then give the reasons why you feel the method(s) would apply.

If you answer YES, then describe in detail what those changes would be.

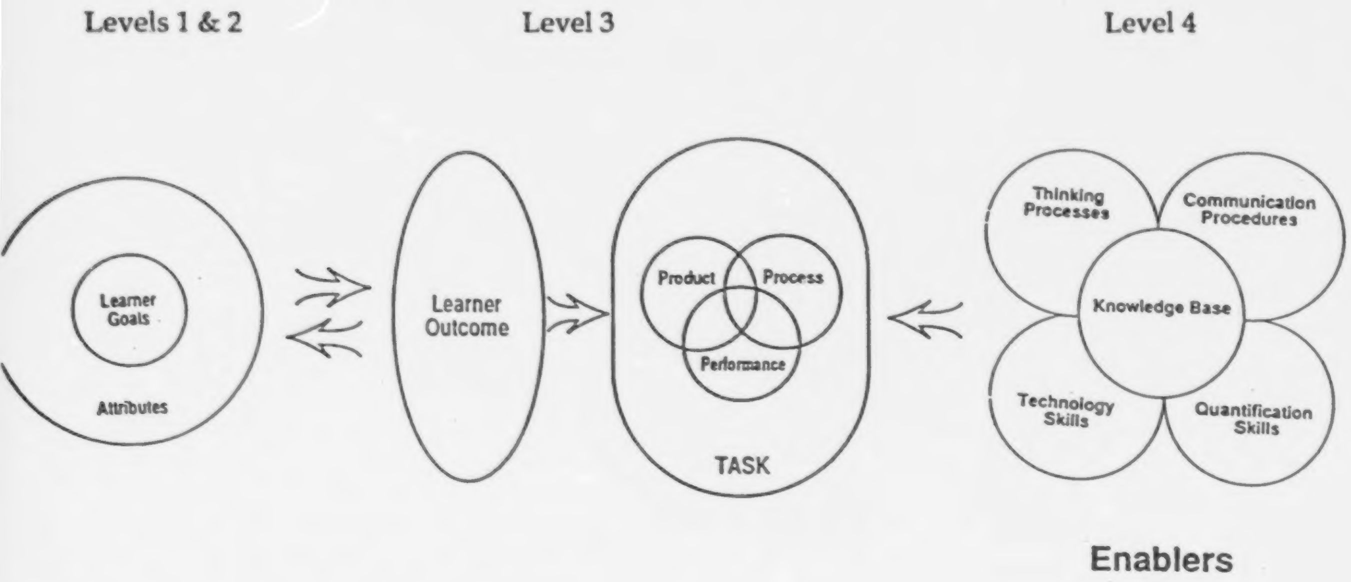
An educational task related to an outcome will result in a product, a performance, and/or a process. These observable elements make an outcome assessable. In the tasks above, one can apply criteria to the paper or speech that is the product of the task. One might also observe and evaluate the process students use to create the product. It is important to note that a task is not an outcome; rather it is the means by which we render an outcome teachable and assessable.

The Relationship Between Learner Outcomes and Attributes

If outcomes are to bridge the perceived gap that exists between broad targets and enablers, then the tasks in which they are contextualized must not only draw upon various enablers but also produce evidence that attributes are being achieved. One way to ensure that result is to develop learner outcomes with the attributes of learner goals clearly in mind. We want to develop outcomes that will address one or more identified attributes (suggested procedures for developing specific outcome statements are described in Appendix C).

The Wisconsin Educational Targets Model

We have determined four identifiable types of educational targets, each existing at a different level of generality. A level's position in the model does not suggest greater or lesser importance. The relationship of levels to one another and the placement of contextualized tasks appears in the following figure:


Levels 1 & 2
Level 3
Level 4
Learner Goals
Attributes
Learner Outcome
Product
Process
Performance
TASK
Thinking Processes
Communication Procedures
Knowledge Base
Technology Skills
Quantification Skills
Enablers

*It is important to note that the task is near the center. The task provides context for often isolated enablers, serves as a contextualization of desirable learner outcomes, and gives evidence that the student is acquiring the attributes of learner goals. It is also the focus for instruction and assessment.

Implications for Curriculum, Instruction, and Assessment

The view of outcomes presented here has important implications for curriculum, instruction, and assessment.

Curriculum

Existing curricula are often little more than taxonomies of discipline-specific enablers isolated from a meaningful context and arranged in sequential lists of targets to be introduced, mastered, practiced, and reviewed. If we begin to view outcomes as complex human behaviors integrating enablers from various disciplines and truly intend to focus our efforts on those outcomes, curricula will have to change to reflect this new conception. It would be unrealistic to suggest that the disciplines will disappear any time in the foreseeable future or even that their disappearance would be desirable. However, some discipline frameworks may have to change.

In language arts (English) we will have to recognize that the broad enablers of speaking, listening, reading, and writing are really not discipline specific. They are required for learning in all disciplines. Furthermore, they operate differently in different disciplines (like thinking processes). The nature of a discipline's knowledge base reshapes the way in which the enablers function. Therefore, they must become an integral part of each discipline. If our curricula focus on tasks, that will not be difficult, since the product or performance which emerges when a task is performed must be communicated in the language and modes of the appropriate discipline. Of course, language arts will be interested in the communicative enablers as they relate to its own knowledge base--literary heritage, literary criticism, linguistics, drama/theater, and aesthetic writing--but the same interest in those enablers will be central to all disciplines (as will be the interest in thinking processes).

Furthermore, under this approach all curricula will have a super-disciplinary set of outcomes. They will transcend disciplines and give evidence that learner goals are being met. Not all of these outcomes will be relevant to every discipline, but each will be relevant to many. Each discipline will need to examine some finite list of outcomes and identify those toward which it has a responsibility, those which are particularly relevant to it. The discipline will then need to decide how those outcomes can be contextualized in tasks within the discipline not only to reflect the outcome but also to develop important disciplinary enablers. In other words, the discipline will have responsibilities to education beyond the development of its own enablers.

Instead of being taxonomies of enablers, the curricula will be sequences of tasks incorporating enablers and representing the generic outcomes relevant in each discipline. Applying knowledge and skills will be prized above simply knowing data and having skills. But what if some prized enablers within a discipline do not seem to fit into tasks which lead to some generic outcome? Will we be losing important discipline-specific content? If this seems to be the case, one of three conditions exists.

1. The discipline has rejected, as unrelated to the discipline, a generic outcome which really does have relevance. The discipline should revisit the list of generic outcomes.

2. The cross-disciplinary teams that developed the generic outcomes have missed an important outcome. The finite list needs to be expanded.

3. The prized enabler, while of interest to members of the discipline, really has little importance in the post-educational world. Perhaps we cannot afford to spend scarce time and resources giving instruction in it.

Those who fear losing the integrity of the disciplines should remember that, when contextualized, the outcome will assume the character of the discipline and the substance of its enablers and, in that sense, become discipline-specific.

Instruction

Much current instruction focuses on teaching isolated enablers. Often we teach about the enabler rather than teaching students to use the enabler. This is particularly true of what have previously been called "competencies" or "skills." For example, we are apt to teach students about writing rather than how to write for a purpose. A feeling erroneously exists that if students are able to define something, they will be able to apply it.

When the focus of instruction is tasks, the nature of instruction must change. The teacher becomes more of a coach, preparing students for a clearly focused goal and making clear the criteria for evaluation. Taking this outcome (task-centered) approach to education will obviously require considerable staff development.

Assessment

One of the biggest challenges in implementing outcomes is consistently assessing students' achievement of them. Although we have made some progress in shifting the focus of curriculum and instruction toward at least the higher levels of enabling taxonomies, our most commonly used assessment instruments continue to be multiple-choice, norm-referenced tests which measure mostly isolated behavioral objectives. Such instruments have proved to be time efficient, relatively inexpensive, and reliable.

Where prevailing assessments fall short, however, is at least equally important. Teachers and educational theorists question their validity or ability to assess what they claim to assess to meet their purposes. If we want to know whether students have achieved a targeted standard with respect to certain outcomes, the instrument must provide information about the degree to which that student has achieved that outcome rather than simply telling how well a student performs on that outcome in comparison to other students. Norm-referenced tests fail to provide this information. While it is true that so-called objective tests can be criterion referenced, many outcomes do not lend themselves to the multiple-choice format.

If we intend to center curriculum and instruction on outcomes and tasks as they are defined in this paper, we will need to make assessment consistent with this approach. The assessments will have to take the form of tasks which replicate the tasks used in instruction. Only in this way can we determine whether the broader learner goals and their attributes are being achieved. This approach calls for new forms of assessment known as "performance" and "portfolio" assessments. The key characteristic of these assessment instruments is the application of knowledge and skills for authentic purposes. Performance tasks result in a product, a performance, or both as well as a process that can be observed and assessed. Of course, what we gain in validity, we lose in efficiency and economy. It takes longer to administer and score this kind of assessment. At one time we also suspected they were unreliable, but experience with writing samples proves that it is possible to overcome this problem. The benefits of increased validity, especially consequential validity (see Linn, Baker, and Dunbar, 1991), will be well worth the time and expense.

Concluding Remarks

This Learner Outcomes definition is distinctly different from those currently being used. While we argue strongly for an outcome-oriented educational program, it would be wrong to infer that we favor outcome based education (OBE) as it is typically being practiced in many locations. Many well-intentioned OBE programs, tend to focus on mastery of isolated "outcomes" that are really what we have characterized as enablers. We don't suggest that such targets are unimportant, but to focus on them entirely and to teach them for their own sake is a mistake. Integrating knowledge, skills, thinking processes, and affective traits in executing engaging, authentic tasks related to sound learner outcomes should be the major emphasis of educational programs.

We readily acknowledge that the important consideration of developmental appropriateness of outcomes, tasks, and enablers has not been addressed. That does not reflect an insensitivity to the importance of paying attention to developmental and learning style differences in children. However, we feel that to enlarge upon those matters here might distract the reader from the central theoretical framework of this paper.

The ultimate usefulness of the ideas presented here will be realized when educators begin to implement this paper's content by actually framing learner outcomes and then contextualizing them in important instructional and assessment tasks. In so doing, they will be forced to grapple with the concerns of developmental appropriateness.

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Appendix A:
Wisconsin Learner Goals and Attributes

A special Goals Panel appointed by the Governor and State Superintendent of Public Instruction of Wisconsin developed the following list of learner goals in 1993. The development included a process that allowed for input from citizens, school boards, and educators. The panel held special hearings in each of the state's 12 cooperative educational service agencies. A team of consultants at the Wisconsin Department of Public Instruction identified the attributes based upon input from the goals hearings. The goals were submitted to the Wisconsin Legislature on September 1, 1993, as required by s. 9145(9c), 1991 Wisconsin Act 269.

According to the Wisconsin Educational Targets Model, the first two goals fall into the category of enablers. The third goal, dealing with the application of knowledge and processes, is a broad characterization of the Learner Outcomes themselves. Thus, the first three goals do not have attributes. Attributes listed under the any of the final seven goals often apply to more than one goal. For the sake of convenience and clarity, the attributes are listed only once.

Goals and Attributes

1. **Build a substantial knowledge base.**

2. **Develop thinking and communication processes.**

3. **Apply knowledge and processes.**

4. **Acquire the capacity and motivation for life-long learning.**

    - Augments and values learning.
    - Is open to new ideas.
    - Has avocational interests.
    - Understands the need for ongoing education.

- Searches for knowledge to satisfy curiosity.
- Sets goals and makes plans to achieve them.
- Is a risk taker.

5. Develop physical and emotional wellness.

- Avoids harmful chemical substances.
- Engages in healthy dietary practices.
- Engages in some sort of physical fitness program.
- Exhibits a healthy life style.
- Manages stress in appropriate ways.
- Believes in own self worth and maintains a positive view of self.
- Maintains a positive attitude toward others.
- Feels a sense of belonging.
- Demonstrates positive social relationships.
- Shows concern for safety.

6. Develop character.

- Chooses ethical courses of action.
- Takes responsibility for one's own actions.
- Is dependable.
- Displays empathy and helps others.
- Demonstrates honesty and integrity.
- Displays an appropriate sense of humor.
- Knows when and how to negotiate and compromise.
- Develops social skills that lead to quality relationships.

7. Be a responsible citizen.

- Accepts responsibilities of membership in society.
- Knows the role and impact of social and organizational systems and operates effectively with them.
- Performs community service.

- Assumes leadership or supporting roles as appropriate.
- Practices behaviors that promote the basic values of our democracy.
- Is informed about current issues.
- Respects the rights of others.
- Understands political and economic global interdependence.
- Practices environmental stewardship.
- Participates in the political process.

8. Be prepared for productive work.

- Understands the connection between learning and economic success.
- Knows how to prepare for and obtain employment.
- Understands and improves systems.
- Works cooperatively with others.
- Evaluates change and adapts appropriately.
- Is motivated and persistent and achieves timely results.
- Has necessary entry-level attitudes, skills, and qualities for productive work.
- Evaluates performance, and provides and profits from feedback.
- Manages resources effectively.
- Has tentative work goals and plans to achieve them.

9. Respect cultural diversity and pluralism.

- Acts with a sense of equity.
- Works well with individuals and groups from diverse backgrounds.
- Values individual and cultural differences.
- Is able to communicate in more than one language, applying cultural norms.
- Acts in a way that is consistent with a cultural context.

10. Develop aesthetic awareness.

- Appreciates expressions of the human experience in the arts and humanities.
- Respects and defends individual and cultural variations in aesthetic and artistic expression.
- Understands the impact of aesthetic qualities of the environment on the well being of an individual, community, or society.
- Encourages and promotes artistic expression.
- Strives for quality and integrity in performance and production.
- Attends artistic and cultural school and community events.
- Participates in cultural and artistic expression or appreciation activities.
- Communicates effectively in one or more art forms.
- Encourages innovation in performance and production.
- Weighs aesthetic considerations in decisions and activities.
- Is knowledgeable about aesthetic aspects of culture.

Appendix B:
Wisconsin Learner Outcomes

The following annotated list of Wisconsin Learner Outcomes is the result of a cooperative effort by several hundred Wisconsin educators, parents, and business persons. They developed the Outcomes over a period of almost two years using the Wisconsin Educational Targets Model as the basis for the developmental efforts.

1. **Identify, develop, evaluate, and apply criteria to ideas, products, or performances of one's self or others.**

   This outcome speaks to the practice of being constructively critical of the work of other persons as well as that produced by one's self. A person should realize when such criticism is "objective," based upon analytical factors, and when it is "subjective," based upon emotional or personal factors. Students should apply criteria developed by themselves as well as those developed by others.

2. **Revise a product, performance, system, or idea in response to relevant information.**

   Relevant information might include additional data, changes in a situation, or feedback from experts, peers, or family members. Although the revision may simply result in a change that makes the item in question different than it was before the change, the basic intent is that the change results in an improvement. The expectation is that students will sort through all information presented and choose to use only that which will result in improvement.

3. **Make informed decisions by examining alternatives and anticipating consequences of actions.**

   Familiar sayings such as "look before you leap" and "think before you act" capture the essence of this outcome. A student should gather evidence and information relevant to some contemplated action, weigh the pros and cons of the potential results of that action, and then choose the proper course of action.

4. **Achieve desired results by interpreting and executing instructions, plans, models, and diagrams.**

   Essentially this means that a person can follow directions in any form: written, spoken, pictoral, or represented as mathematical symbols. Following directions appropriately includes sorting things out when they are not clear as well as evaluating the successful attainment of the desired result. In most cases, the actual result is consistent with the wishes of the direction-giver as well as the direction-follower.

5. **Recognize and devise systems and describe their interdependence.**

   A system is a set of elements so related as to form a unit or organic whole. A closed system is orderly and predictable. Open systems are self-organizing and essentially unpredictable because they are sensitive to many kinds of feedback. Examples of the former include a musical composition, a game complete with its rules, a procedure designed to solve a whole collection of similar mathematics problems, and mechanical devices. Social systems, whirlpools, weather, and human beings are examples of open systems.

6. **Create a quality product, process, or performance that will meet a need.**

   Although similar to the previous outcome, this outcome is distinguished from it by being a tangible or visible thing or event. It can also include things with an aesthetic, intellectual, or emotional content such as paintings, musical renditions, an athletic performance, poems or essays or a novel, making personal and public policy, or an elegant approach to solving a mathematics problem.

7. **Respond to the aesthetic, intellectual, and emotional aspects of an event, performance, or product.**

   This response might take the form of some new product or performance. The creative arts such as acting, performing musical compositions, and orally interpreting literature would be examples of a response.

8. **Transfer learning from one context to another.**

   The student should identify common characteristics of two or more situations, objects, events, or persons. Often these common characteristics lie below surface features, so one needs to be analytical. Another manifestation of this outcome is finding a practical application for a theory. This outcome also involves imagining new uses for existing products and new applications of ideas.

9. **Recognize, define, and solve a problem.**

   This outcome includes differentiating between routine situations and those that are truly problematical in that the solution path is not immediately obvious. Often, the situation is ill-defined; the student needs to formulate the problem and eliminate irrelevant information. An effective problem solver has a wide repertoire of strategies and can often identify multiple solutions and/or solution processes.

10. **Recognize and communicate one's strategies for accomplishing objectives.**

    Students should think and reflect upon their own thinking processes and thus improve them. Those approaches should be shared with others.

11. **Work effectively in groups to accomplish a goal.**

    The changing workplace often demands that workers collaborate with fellow workers. However, this does not imply that working independently is not valued.

12. **Defend a position by integrating information from multiple sources.**

The position or point of view being defended could be one's own or that of another person or group. The position can take the form of some controversial issue of a social, political, environmental, economic, or hypothetical nature. A key word here is "integrating." Students must gather solid information from a variety of external sources and then blend that information with their own personal knowledge base and frame of reference to create an informed argument in favor of a position, point of view, or issue.

13. **Develop and test a hypothesis.**

A hypothesis is a conjecture about a rule or relationship among a collection of events, objects, ideas, or persons. Students should devise a plan to identify and collect data, then interpret and use that data to determine whether or not the conjecture is true.

14. **Recognize when a need for specific information exists and demonstrate the ability to locate, evaluate, and focus that information.**

It is rare for people to be in a situation in which they know all there is to know about that situation. They have to efficiently avail themselves of needed information, that is to consult a recognized authority, to extract data from library sources, or to access electronic data bases. However, in this information age, information overload frequently occurs. Thus, this outcome requires students to sort through all information, eliminate that which is irrelevant to the situation at hand, and then organize what is left into a usable form.

15. **Conceive of places, times, and conditions different from one's own.**

While imagination and creativity are inherent in this outcome, it encompasses real as well as fictional places, times, and conditions. One should conceive of life as it actually existed in the distant past as well as envisioning how it might be in the distant future. For example, "What was life in Wisconsin like in 1848?" or "What might it be like in 2048?" Students should think of themselves in environments foreign to their actual existence but very real to others' experience.

16. Identify compelling personal interests and goals and pursue them.

Students should work persistently over an extended period of time on ideas, activities, projects, and goals that reflect their own personal abilities, talents, and interests and not just those imposed by others.

17. Recognize the influence of diverse cultural perspectives on human thought and behavior.

The term "culture" is taken in the broadest sense to encompass groups that share a common history or have a linguistic, racial, geographic, or social bond affecting the way they act and their view of the world. Examples include the civilizations of ancient Greece ; the Incan Empire; and Hispanic, African, or Asian cultures.

Appendix C:
Developing Generic Learner Outcomes

Because outcomes should be applicable in a number of different disciplines, they are described as "generic." Each outcome should define something that is important for students to be able to do that is not exclusively situated in a particular discipline. In order to arrive at a robust set of outcomes, we must assemble cross-disciplinary groups of educators known as good educators rather than simply good subject-matter specialists. Ideally, too, the process should include individuals who are stakeholders in education (for example, employers, parents, or taxpayers). Groups can approach developing generic outcomes in several ways.

1. One can take individual attributes or groups of attributes and work to develop an outcome that will yield evidence of the target attributes.

Suppose that a group wanted to develop an outcome leading to tasks giving evidence of attributes related to being prepared for productive work:

- Evaluates change and adapts appropriately.
- Evaluates performance and provides and profits from feedback.
- Is open to new ideas.

After some thought, they come up with the following outcome:

> Revise a product, performance, system, or idea in response
> to relevant information.

This outcome does not specify a discipline, but being able to command it would give evidence of the desired attributes. The group might next attempt to contextualize the outcome in various disciplines. The first three tasks contained on pages 12 and 13 are examples of tasks that actual groups of Wisconsin educators came up with when attempting to contextualize an outcome.

Although we could conceive of other tasks within other disciplines, these three make clear the application of the outcomes to various disciplines. Each task contextualizes the outcome, but requires different knowledge bases, thinking processes, and communicative procedures. Each will result in an assessable product or performance and an observable, evaluatable process. Some may require a week or more to complete; others may be finished within a class period.

2. It is also possible to begin with a preconceived idea about an important generic outcome. Sometimes these prove to be attributes or tasks rather than true learner outcomes. The first step with such outcomes is to test them against the list of attributes to see if they have been so identified. If not, the next step is to see whether they give evidence of being identified attributes. The third step is to attempt to contextualize them in several disciplines in the form of tasks. If the potential outcome is itself a task, it will be difficult, if not impossible to contextualize it in other disciplines. The following outcomes meet the suggested tests.

- Can create a quality product, process, or performance that will meet a need.

- Can devise systems to meet specific purposes. (This could be contextualized within virtually any discipline and is surely a desirable outcome.)

- Can identify, develop, evaluate, and apply criteria to one's own idea, product, or performance and to those of others.

3. Another possibility is to begin with a favorite task or assignment and distill from it those features that are not subject-specific. What remains will usually be an outcome if it has application in other disciplines. One can then test it by attempting to contextualize it in tasks within two or more other disciplines.

Suppose that a group began with the following task:

- Can create a game using technical terms.

The game makes it too specific to be a true outcome. It would be difficult to contextualize it in various disciplines. If one distills the specific references to "game" and "technical terms," one would be left with something like the following:

- Can devise a system (game) for a specific purpose complete with processes, rules (technical terms), and materials.

Without the items in parentheses, one could easily contextualize it in various disciplines.

When a group is satisfied that it has devised a pool of outcomes that give evidence of the complete range of learner goals and attributes, it must reduce that pool to a manageable number. The group will want to avoid overlap as much as possible while still ensuring coverage; some criteria are needed to facilitate this process. Outcomes addressing the greatest number of attributes will be the most efficient. However, outcome *quality* should also be a factor. Quality is determined by the tasks in which the outcomes are contextualized. Thus, the next step is to look at the considerations important in developing tasks.

Appendix D:
Developing Authentic Tasks

An authentic task will embody all of an outcome's important features. It will produce a product, a performance, and/or a process that is observable and thus subject to assessment. It will draw upon a rich variety of disciplinary and cross-disciplinary enablers. But it should also meet some other selection criteria. If we design tasks with those criteria in mind, the degree to which tasks meet the criteria can serve as another way of selecting the final range of learner outcomes.

Criteria for Evaluating the Quality of Educational Tasks

In addition to the natural desire that well-thought-out outcomes and carefully developed tasks bridge the existing gaps between levels of educational targets, one needs to be concerned that tasks be consistent with what research tells us about the ways in which children learn and the conditions that foster learning. For that reason we recommend that outcome and task developers apply the following criteria to potential tasks:

Authenticity

Most of the following criteria relate to realism in some way. Perhaps the primary consideration ought to be how tasks can be more realistic and thus more relevant to students. Not the least important in this respect is finding an authentic audience for the products or performances that a task produces.

Integration

Although they may be contextualized in a discipline, authentic tasks require students to draw knowledge from several disciplines or sub-disciplines and integrate it with higher level thinking skills and symbol-manipulating processes such as speaking, reading, writing, listening, quantifying, and gesturing. This integrated material comprises the enablers. (Jacobs 1991)

Collaboration

Recent developments in education, such as whole language and cooperative learning, make us more aware of the community of learning. Much of what we do in life requires us to work with others, not in isolation. Traditional views of intelligence and consequent practice have made learning a highly individualistic activity. New instructional and assessment tasks must allow students to work together. (Johnson and Johnson 1990)

Tools and Technology

To be ready for today's reality, students must master ever more complex tools and technology. Instead of making this technology a major focus of education, we avoid its use in contexts where it would be most obvious to students. We deny them the use of calculators and spell-checkers when taking tests. Some teachers only reluctantly allow students in English classes to use word processors when doing papers. Instead of worrying about students becoming dependent on technology, we must recognize that that dependency is already a fact in much of our society. If we let students leave school without the ability to use the technology they will need in their subsequent education or employment, we will be failing to meet our learner goals.

Multiple Intelligences

Howard Gardner (1985) has pointed out the existence of multiple intelligences. Traditional educational practice emphasizes the logical-mathematical and linguistic at the expense of the musical, spatial, bodily-kinesthetic, interpersonal, and intrapersonal. This practice unfairly discriminates against some children. Outcomes for the twenty-first century must arise from tasks which draw upon the widest possible range of intellects.

Duration

The structure of the educational system and the nature of assessment instruments often means that students must complete most assigned educational tasks within tight time constraints, usually those of a typical class period of about 45 minutes.

Yet, many things that we must do in life in order to achieve identified learner goals span hours, days, weeks, or even months. We must provide educational tasks that require students to sustain effort over longer periods of time. Portfolios provide effective means for organizing and tracking these more complex and time-consuming tasks.

Sense of Time

Some individuals live almost exclusively in either the past, the present, or the future with little understanding that we must learn from the past, live in the present, and prepare for the future. The full range of educational tasks should make clear the importance of all three.

Place

Tasks do not occur in a vacuum. We cannot expect students to achieve outcomes unless we consider the place in which education is supposed to occur. Do proposed tasks contribute to those characteristics of place which are so important in education--aesthetics, civility, ethics, conversation, security, stewardship, pride in craftsmanship? (Hartoonian 1992)

Sense of Culture

Well-conceived tasks will provide students with an understanding of and a feeling for the richness of their own culture and/or others' cultures.

Of course not every outcome and task will meet all of these criteria. Some tasks will be individual, and others will not require tools and technology. Still the finite group of outcomes and tasks which will finally drive instruction and assessment programs need to give full attention to all the above criteria.

Tasks and Attitudes

The family properly instills attitudes because attitudes are regarded differently by different people and because they often involve personal values. Still, certain attitudes motivate students to apply skills and knowledge and encourage them to persevere and do their best. Perhaps certain attitudes toward work, learning, and others can and should be reinforced by other partners in the overall educational lives of students.

It may be possible for communities working closely together with groups widely representing that community to identify attributes reflecting such attitudes that might be made clear targets of education. Such attributes can, like Learner Outcomes, be contextualized in learning tasks. By their very nature, tasks make possible the observation of attributes. In producing the products and performances required by tasks, students develop a process. Like the products and performances, the processes are observable. While attitudes observed in the process of accomplishing tasks may not appropriately be used to evaluate the products or performances, they might well be a basis for reporting to parents information that would be valuable for them to know.

Educational Targets

- **are not all the same**
- **differ in these ways:**

degree of generality

their direct relationship to a specific school subject content area

the extent to which they subsume other educational targets

ease of assessing their presence in, or attainment by, students

who formulates them

Educational Targets

- Statements that characterize our students.
- Things that the educational system strives or aims for.
- They give form and direction to curriculum, instruction and assessment.

- Often labeled as:

objectives

goals

skills

competencies

outcomes

Some Suggested "Outcomes"

Environmental Stewardship

Citizenship

Read and Understand Written Materials

Can Organize an Introductory Message in Topical Order

Compare and Contrast US Political and Economic Systems with Those of Other Countries

Can Analyze

Computer Literacy

Use Math to Solve Problems

Allocate Resources

Use Algebraic Processes

Can Learn New Skills

Facility for Social Interaction

EDUCATIONAL TARGETS

Learner Goals

Learner Goals

- The broadest and most abstract
- Not necessarily synonymous with "educational goals"
- Neither time nor culture-bound
- Identified by policy-makers at state and district level
- Four examples:
    - Self-realization
    - Civic responsibility (citizenship)
    - Social compatibility
    - Employability

EDUCATIONAL TARGETS

Learner Goals

Attributes

Attributes

- Still abstract, but somewhat more observable
- Establish the features of Learner Goals
- Are time and culture-bound
- Are determined by the culture in which we live
- May relate to more than one Learner Goal
- Examples:

    Works well with others

    Understands systems

    Manages resources effectively

EDUCATIONAL TARGETS

Learner Goals

Attributes

Enablers

Learner Goals

Attributes

Learner Outcomes

Enablers

Curricular Objectives

Enablers

- More concrete
- Make it possible to perform Educational Tasks
- Basic Kinds:
    1. Subject matter (facts, concepts, procedural skills)
    2. Cross-disciplinary
        Thinking process
        Communicative procedures

Taxonomy of Enablers
Language Arts

Discipline Level Enablers
(Written Composition)

Course Level Enablers -
[Competencies]
(Expository Writing)

Unit Level Enablers -
[Basic Skills]
(Punctuation)

Lesson Level Enablers -
[Behavioral Objectives]
(Use of Semi-colon)

Learner Goals

Attributes

Learner Outcomes

Enablers

Curricular Objectives

Learner Outcomes

Complex human behaviors that involve the integration of many and different kinds of enablers as they are applied to the completion of real tasks.

Educational Targets

Learner Goals

Attributes

Measurable Learner Outcomes

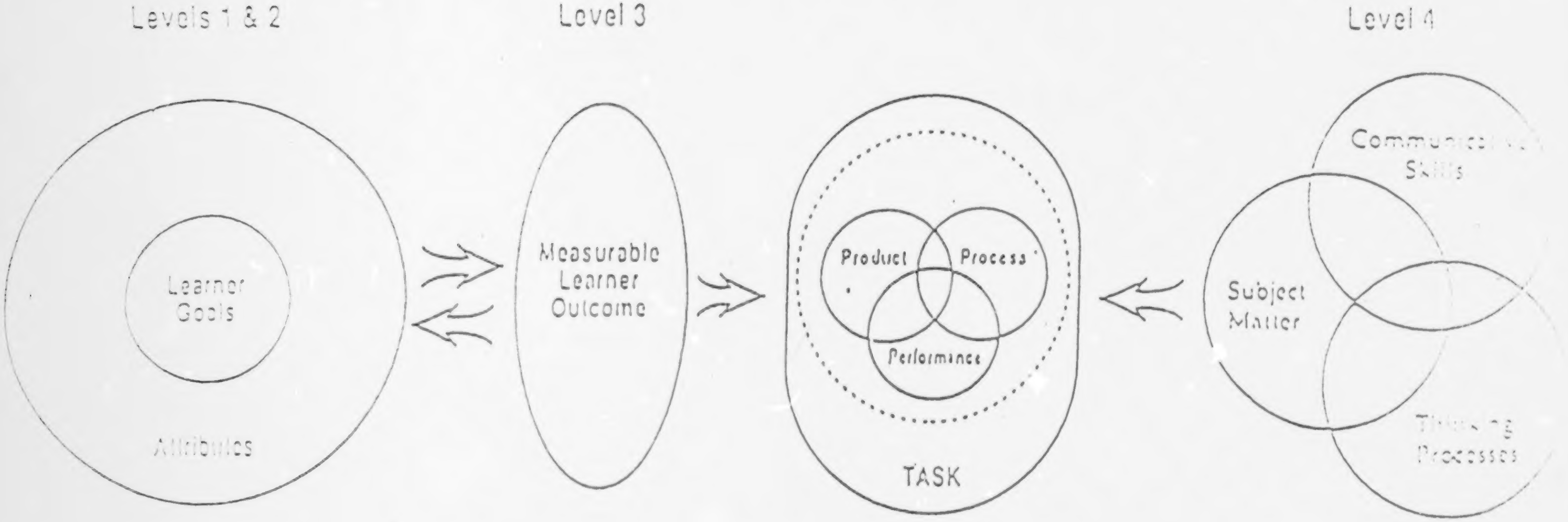
Enablers

Task

An outcome that has been contextualized, usually in a specific discipline. It will:

- **Result in a product or performance**
- **Reveal an observable process**
- **Require knowledge, thinking, and communication enablers**
- **Meet some desirable task criteria**
- **Be used for instruction and/or assessment**

Taxonomy of Educational Targets



Levels 1 & 2

Learner Goals

Attributes

Level 3

Measurable Learner Outcome

Product

Process

Performance

TASK

Level 4

Communication Skills

Subject Matter

Thinking Processes

The Contextualization within a Discipline
of a Measurable Learner Outcome
for the purposes of
Instruction and Assessment

Enablers

Focus for Policy Makers

Focus for Curriculum Planners

Current Focus of
Curriculum and Assessment

Attributes:

- Deals effectively with Change
- Respects human interdependence and individual uniqueness
- Understands systems

Outcome:

Can revise a product, performance, system, or idea in response to relevant information.

Outcome integrated with attributes:

Can assess the probable effects of a merging of different cultures upon a system and suggest changes that may be necessary to accommodate the merger.

Contextualized Task

Recent settlers in Wisconsin from South East Asia are predominantly farming families. Climate differences make it difficult for them to practice their livelihood. You are part of a group formed to advise them about which of their crops might be possible to raise and under what conditions and to recommend alternatives for those which cannot. Research this topic and propose a program for sharing this information, taking into consideration the possible communication barriers.

Task Two:

Imagine you have been hired as an engineer for a packaging company. Your task is to create a package to transport eggs of endangered birds.

Design and construct a container from five sheets of typing paper and one meter of masking tape that will protect a raw egg from a drop of at least one meter.

The container must be constructed so that the egg can be removed after each test and checked for cracks.

Task Three:

Try a little experiment. Bring to class a tape-recorded copy of a song you really like. Place the tape in the class music box. Each student will choose a tape from the box. After having listened to the tape you chose, write a description of the person who brought in this tape and who would enjoy it. This description might include:

- interests this person has such as hobbies and how s/he uses leisure time,
- beliefs and attitudes,
- physical appearance and dress.

Then, interview the person who actually brought the tape to find out the degree to which he/she matches your written description.

Finally, write another paper in which you compare and contrast the original description and the results of the interview.

Task Four:

A. Sally is on vacation and plans to rent a car. Here are her options:

Rent - a - Wreck: $15.95 a day + .19 a mile
Lemons for Hire: $18.50 a day + .16 a mile

Describe in detail the solution method(s) you would use to solve the following problem:

> How many miles would Sally have to drive to make the Lemons for Hire the more economical choice?

{No credit is given for solving the problem. Just describe the method you would use to solve it.}

Task Four cont.:

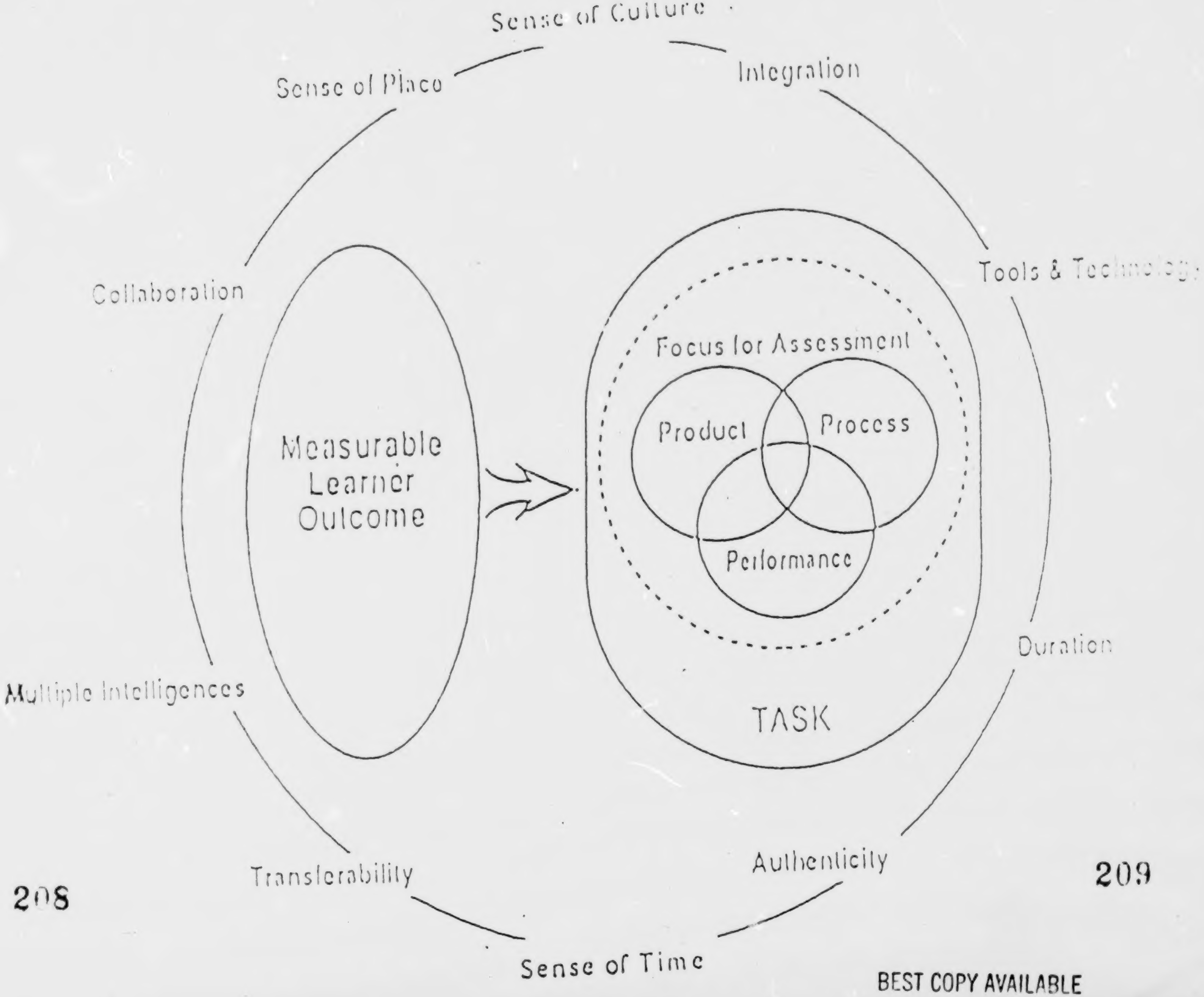
B. Now suppose the rent-a-car conditions were changed as follows:

Rent-a-Wreck: $15.95 a day + .19 a mile
but first 100 miles free.
Lemons for Hire: $18.50 a day + .16 a mile
but the first 50 miles are free.

Would the method(s) you described for the first problem have to be changed in order to solve this problem?

If you answer NO, then give reasons why you feel the method(s) would apply.

If you answer YES, then describe in detail what those changes would be.


Sense of Culture
Sense of Place
Integration
Collaboration
Tools & Technology
Measurable Learner Outcome
Focus for Assessment
Product
Process
Performance
TASK
Multiple Intelligences
Duration
Transferability
Authenticity
Sense of Time

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Outcome: Complex ability involving integration of knowledge, concepts, and skills applied to completion of real tasks. They are not subject-specific.

Enabler: Any body of knowledge, any skill, any concept a student must have to complete an instructional or assessment task.

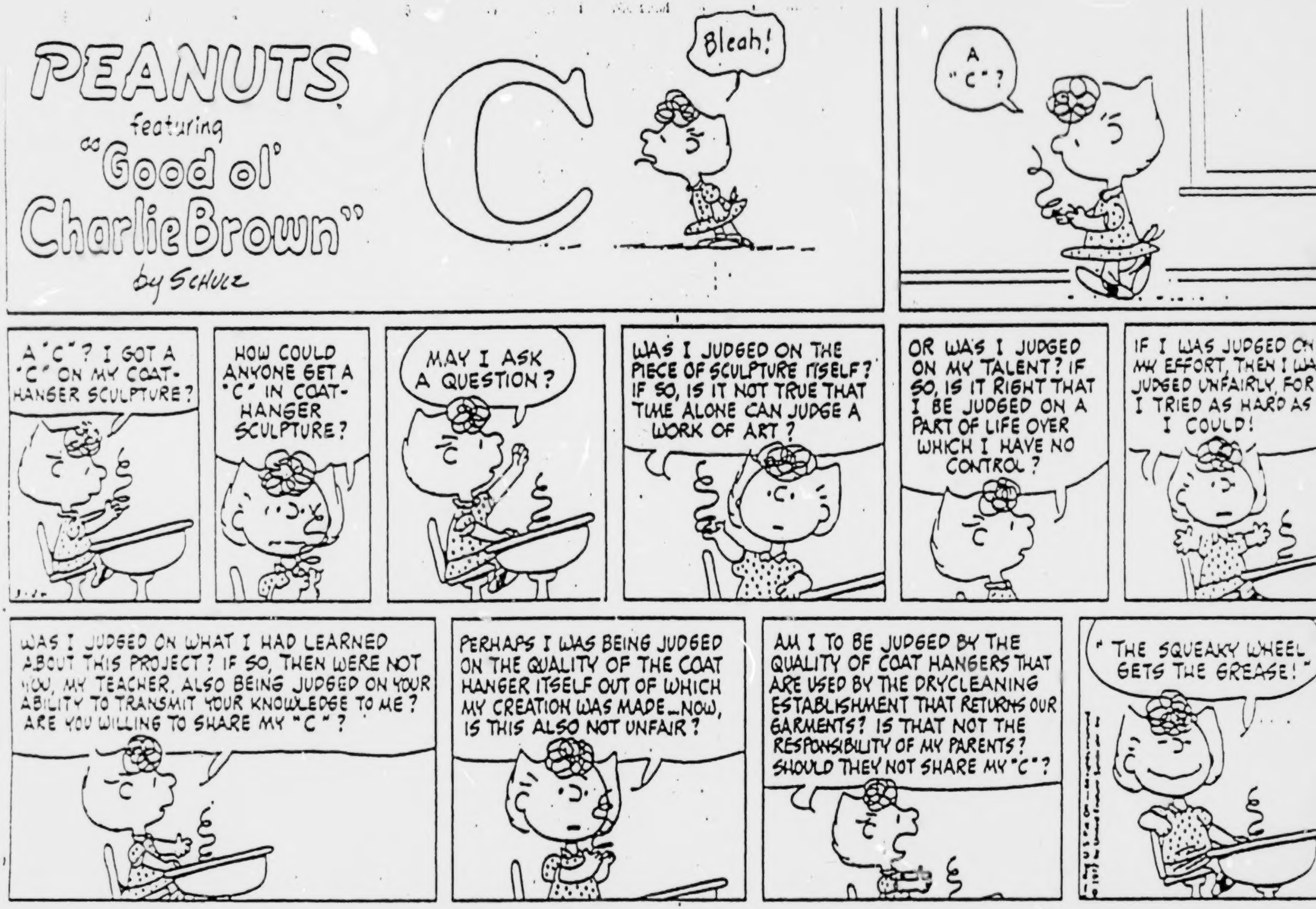
Task: An authentic application of an outcome during which students produce an observable product or performance using an observable process.

Outcome Based Education

1. Success determined by what students know and are able to do rather than by courses taken, credits accumulated, or grades achieved.

2. Direct assessment of outcomes, frequently using performance instruments.

3. High standards set on clearly defined criteria and benchmark performances.



PEANUTS
featuring "Good ol' Charlie Brown"
by SCHULZ
C
Bleah!
A "C"?
A "C"? I GOT A "C" ON MY COAT-HANGER SCULPTURE?
HOW COULD ANYONE GET A "C" IN COAT-HANGER SCULPTURE?
MAY I ASK A QUESTION?
WAS I JUDGED ON THE PIECE OF SCULPTURE ITSELF? IF SO, IS IT NOT TRUE THAT TIME ALONE CAN JUDGE A WORK OF ART?
OR WAS I JUDGED ON MY TALENT? IF SO, IS IT RIGHT THAT I BE JUDGED ON A PART OF LIFE OVER WHICH I HAVE NO CONTROL?
IF I WAS JUDGED ON MY EFFORT, THEN I WA JUDGED UNFAIRLY, FOR I TRIED AS HARD AS I COULD!
WAS I JUDGED ON WHAT I HAD LEARNED ABOUT THIS PROJECT? IF SO, THEN WERE NOT YOU, MY TEACHER, ALSO BEING JUDGED ON YOUR ABILITY TO TRANSMIT YOUR KNOWLEDGE TO ME? ARE YOU WILLING TO SHARE MY "C"?
PERHAPS I WAS BEING JUDGED ON THE QUALITY OF THE COAT HANGER ITSELF OUT OF WHICH MY CREATION WAS MADE...NOW, IS THIS ALSO NOT UNFAIR?
AM I TO BE JUDGED BY THE QUALITY OF COAT HANGERS THAT ARE USED BY THE DRYCLEANING ESTABLISHMENT THAT RETURNS OUR GARMENTS? IS THAT NOT THE RESPONSIBILITY OF MY PARENTS? SHOULD THEY NOT SHARE MY "C"?
"THE SQUEAKY WHEEL GETS THE GREASE!"
...

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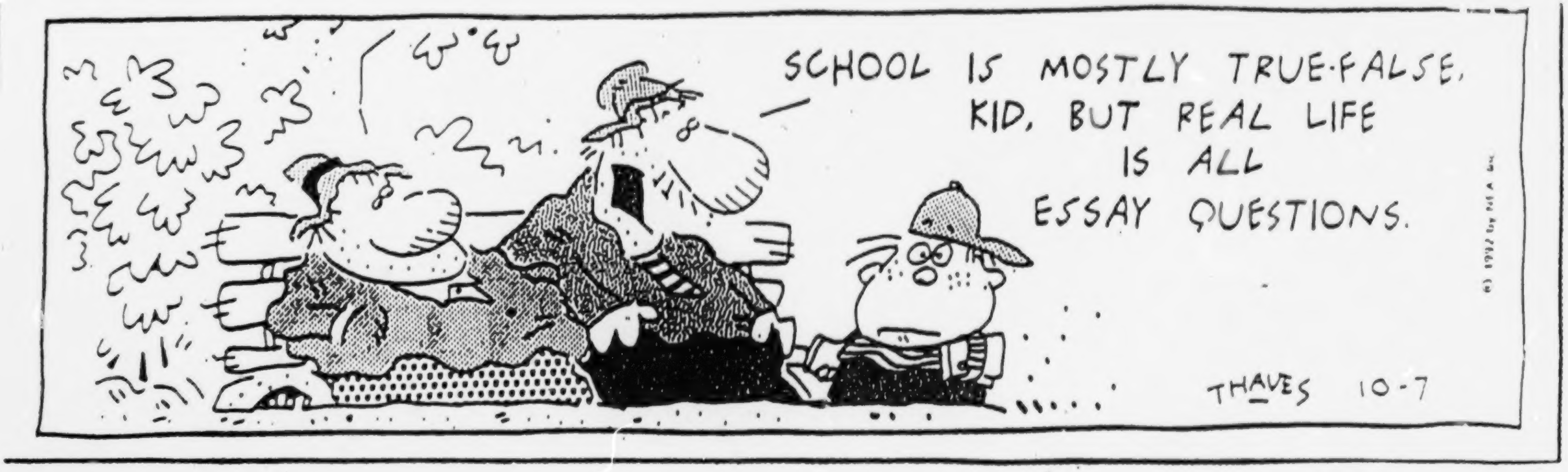
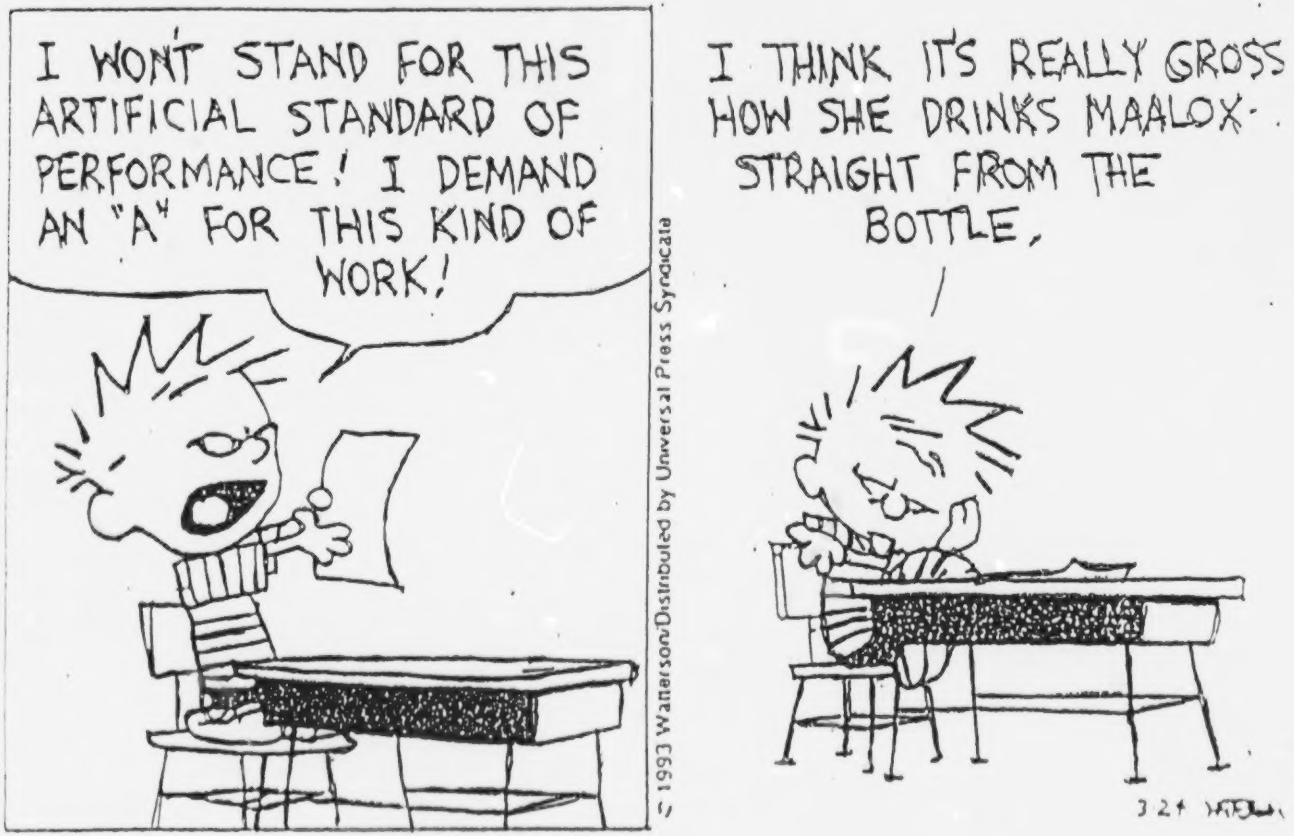
FRANK AND ERNEST® by Bob Thaves


SCHOOL IS MOSTLY TRUE-FALSE, KID, BUT REAL LIFE IS ALL ESSAY QUESTIONS.
THAVES 10-7

10-14-92


I WON'T STAND FOR THIS ARTIFICIAL STANDARD OF PERFORMANCE! I DEMAND AN "A" FOR THIS KIND OF WORK!
I THINK IT'S REALLY GROSS HOW SHE DRINKS MAALOX STRAIGHT FROM THE BOTTLE.
3-24

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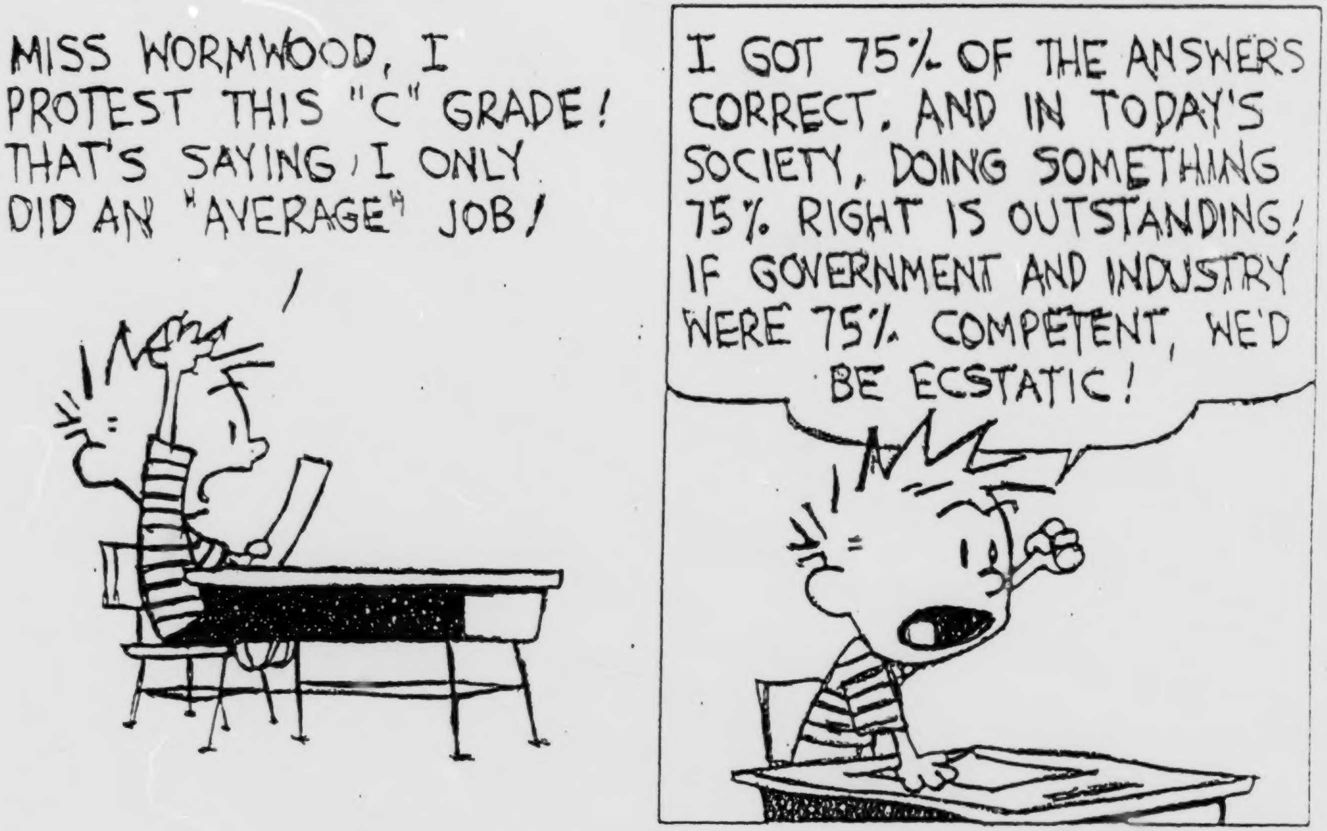
Calvin and Hobbes


MISS WORMWOOD, I PROTEST THIS "C" GRADE! THAT'S SAYING, I ONLY DID AN "AVERAGE" JOB!
I GOT 75% OF THE ANSWERS CORRECT. AND IN TODAY'S SOCIETY, DOING SOMETHING 75% RIGHT IS OUTSTANDING! IF GOVERNMENT AND INDUSTRY WERE 75% COMPETENT, WE'D BE ECSTATIC!

Methods for Assessing Performances

HOLISTIC --- Anchor points

PRIMARY TRAIT --- Rubrics

PROFILE --- Analytical Scales

Generic Rubric - Using Written Communication

(4) The performance is a focused, well-organized and fluent piece of writing. The writing is elaborated in a manner appropriate to its genre. The writer controls diction, imagery and tone and consistently follows the conventions of effective written communication.

(3) The writing is focused, well-organized and appropriately elaborated. It may lack the fluency and control of diction, imagery and tone expected in a "4" paper. Although it may contain occasional errors in conventions, these do not seriously distract a reader from the content of the writing.

((2) The writing has clear intent, but occasional lapses in organization--straying from the topic, for example, may occur. There is some elaboration, but this may be inconsistent or shallow. Control of diction, imagery, and tone is weal or nonexistent. Errors in writing conventions begin to call attention to themselves.

(1) The writing lacks focus and organization. It is characterized by unsupported generalizations and/or failure to include relevant detail. The writing lacks character owing to failure to control diction, imagery, and tone. Errors in conventions seriously detract from effectiveness of the content.

Rating Profile - Interviews

Rate each characteristic 1-3 and multiply by factor to get score.

Score	Characteristic	Comments
	Interviewer makes central point of interview clear to audience and interviewee. (3)	
	Interviewer uses thoughtfully prepared, open-ended questions. (5)	
	Questions follow a logical sequence. (3)	
	Interviewer demonstrates skill in making interviewee comfortable (includes courtesy). (3)	
	Interviewer summarizes and restates effectively. (3)	
	Interview has skill in drawing out interviewee. (4)	

Content Standards: What students should know and be able to do. (Curriculum)

Delivery Standards: Opportunity to learn. (Resources and fairness)

Best Practice Standards: How Curriculum should be delivered. (Instruction)

Performance Standards: How well students perform as determined by criteria. (Proficiency)

Assessment Standards: What evidence of student proficiency is reliable and valid. (Adequacy of Measurement)

Performance Assessments

What?	**The content being assessed.**
Why?	**The purpose for assessing.**
How?	**The task to be performed.**
How Well?	**The criteria to be applied.**

RELEVANT TERMS

High Stakes Assessment

Objective vs. Subjective

Norm vs. Criterion Referenced

Authentic

Reliability
- Inter-rater
- Test-retest
- Generalizability

Validity

Standardized

Task Development Record

1. **Learner Outcome Addressed by Task:** #1. Identify, develop, evaluate, and apply criteria to ideas, products, or performances of one's self or others. #6. Create a quality product, process, or performance that will meet a need.

2. **Primary Enablers Required.** Science: Recognize importance of energy as it pertains to thermal systems. Use chemical terminology approximately. Math: Relationship of surface area to volume. Scale drawing and modeling. Lang. Arts: Proposal writing.

3. **TASK: (Address to Student! Should Require High Levels of Knowledge, a Variety of Thinking Processes and Communication Skills. For More Space Use Back of Sheet.)**

   You are a chemist on staff in the research department of a medical supply company. Your task is to develop a "new" hot and cold pack for commercial sale.

   Select at least two existing commercial hot and cold packs for study. Investigate the potential hazards and disposal problems of their contents, consulting a chemical supply catalog (ex. Flinn). Test the effectiveness (temperature, durations, or cost) of these.

   Based on your investigation, determine the desired criteria for your new packs. Select from the heat-of-solution table five substances that you think will make the best hot and cold pack. Using your reference materials, investigate the hazards and disposal of these substances. After your investigation, test only the substances that meet your criteria for effectiveness.

   Using the relationship of surface area to volume, develop the most cost-effective package for your hot or cold pack. Make a scale drawing and a model of your package.

   You must submit your proposal.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What Criteria? To What Level?)**

   Evaluate the criteria and application of criteria used in task. Probably an analytical scale. Evaluate the product proposal. Perhaps a holistic approach here.

5. **Desirable Task Characteristics (Check all That Apply)**

   X a. authenticity
   X b. integration
   ___ c. collaboration
   ___ d. transfer
   ___ e. tools and technology
   X f. multiple intelligence
   X g. duration
   ___ h. time
   ___ i. sense of culture

6. **Estimated Time Required for Task:** About a week of 45 minute class periods.

7. **Prepared by:** Madison 1: Cross disciplinary group.

Task Development Record

1. **Learner Outcome Addressed by Task (Limit to one or two):**
Revise a product in response to relevant information.
Work effectively in groups.

2. **Primary Enablers Required (Include "home" of the task):**
Observe, analyze, brainstorm, sketch and select best design, construct and evaluate prototype, calculate cost, survey, compile, and analyze data. Produce working drawing using CAD technology. (Home: Tech Ed.)

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

Your commercially produced and recently purchased "locker Organizer" just fell apart. Divide into groups of no more than five. Discuss and analyze why the purchased locker organizer failed. Design and develop a plan to produce and market a new and improved locker organizer. After developing your model, construct and test a prototype.

4. **Evaluation: (Holistic, Primary, Trait, Analytical Scale? What Criteria? Against What Proficiency Standard?)** An analytical scale with percentages divided as follows: participation (as determined by peers): 10, functionality of product: 40, cost/drawing: 30, aesthetic: 20.

5. **Desirable Task Characteristics (Check all that apply)**

___ a. authenticity
___ b. integration
___ c. collaboration
___ d. transfer
___ e. tools and technology
___ f. multiple intelligence
___ g. duration
___ h. time
___ i. sense of culture

6. **Estimated time required for task:** Three weeks.

7. **Prepared by:** Tech Ed. 1-CESA 7

Instructions for UsingTask Development Record

(See Reverse Side)

1. **Learner Outcome.** It is important to limit the number of outcomes. Otherwise the task will lack focus. It is nearly impossible to develop tasks that do not involve other outcomes to some extent. However when one thinks of evaluating the task, it will be necessary to focus on those outcomes and enablers that are most important.

2. **Primary Enablers.** The important thing here is to identify the most significant enablers that you see as targets for the task. Upon looking at the enablers and the task itself, an observer should be able to tell what the "science" or "math" is in the task. In cross-disciplinary tasks, the significant enablers in each discipline should be identified and the "home" of the task should be made clear.

3. **Task.** Be sure to include all pertinent data. Sometimes a note to the teacher might be included. It may be well to identify specific materials or equipment needed in the task. Be sure to direct the task to the student. The teacher is talking. Although novelty is important as a means of achieving student engagement, it should not replace authenticity as the test of a good task. The bottom line is "Would you really use this task in your own classroom?" Another might be "Is there a connection between this task and an application in post-formal education life?"

4. **Evaluation.** In most workshops the facilitator will advise you to ignore this item in the first round of task development. However in later rounds, one should be sure that assessment addresses the outcomes and enablers identified in #1 and #2.

5. **Desirable task characteristics.** Not all tasks will address all of these matters. They are listed here in order to raise your consciousness while developing tasks.

6. **Estimated time required.** It is easier to develop long tasks than short ones. Unfortunately the need to adequately cover a domain will mean that some shorter tasks are desirable. Try to keep some of your tasks within a single period.

7. **Prepared by.** Filling in this blank will depend upon how the workshop is organized and what round of development you are in. Sometimes this will refer to an individual or pair, sometimes to a discipline-specific group, and sometimes to a cross-disciplinary group. Your facilitator will tell you how to use this space.

Important:

A. In using tasks for either assessment or instructional purposes, it is essential to make the outcome(s) overt. It is easy to use a task without making clear to the student the importance of the outcome at which it is aimed. In order for the students to become aware of and internalize those applications of knowledge that we believe are important, they must recognize them in tasks that they perform in various disciplines and at various developmental levels.

B. Outcomes and primary enablers should ideally be determined before developing a task. The tasks are not ends in themselves, but rather means by which we instruct or assess. It is important to know our targets. The tail should not wag the dog. Of course if you have an idea for an engaging task, it may well approach important outcomes and/or enablers. Do not, therefore, be slavish about this rule of thumb.

Task Development Record

1. Learner Outcome addressed by task (Limit to one or two):

2. Primary Enablers required (Include "home" of the task):

3. TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)

4. Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)

5. Desirable Task Characteristics (Check all that apply)

____a. authenticity
____b. integration
____c. collaboration
____d. transfer
____e. tools and tech
____f. multiple Intell.
____g. duration
____h. time
____i. sense of culture

6. Estimated time required for task:

7. Prepared by:

Conversations Over Dessert
"Linking School-to-Work Transition with Other Epochal Changes"

Remarks by Kathleen A. Paris, Ph.D., Director
Leadership Institute for School-to-Work Transition
Center on Education and Work
School of Education
UW-Madison
February 2, 1994, Stevens Point
February 9, 1994, Madison

1. Tech Prep and School-to-Work transition as school reform: How is this different from new math?

Involves across the board curriculum restructuring (the heart of educational process)

Pressure to change is coming from outside the educational community

The change is K-12 through postsecondary (e.g., UW system's work on competency-based entrance requirements)

Influx of federal funds

Reflects a shift in the basic mission of the schools *a la* Berryman and Bailey, *The Double Helix of Education & The Economy* (1992). They say, "Change the mission of K-12 schools to take educational responsibility for the economic futures of all students" (p. 7).

2. What is the linkage between school restructuring and school-to-work transition?

The Wisconsin Department of Public Instruction defines school restructuring as "an ongoing process of changing the dynamics of interaction within the school community by utilizing school-based decision-making and site-based management **for the purpose of enhancing performance of students.**" (*Management Restructuring: Building a Collaborative School Community*, 1992, p. 1) Emphasis added.

How teachers and staff are managed is key to changing the curriculum. For classroom experiences to mirror high performance workplaces, the reality of teachers must also change. The experience they have with school leadership will either help them or prevent them from accepting and implementing authentic curriculum change.

3. What is the linkage with continuous improvement\Total Quality Management and school-to-work transition?

Emphasis on full participation/teamwork
Focus on consumer (student) needs
More effective use of human resources (teachers and time)
Reliance on data

4. What do we know about the change process in schools?

Schools are remarkably resistant to change
To be an effective change agent requires attention to process **and** content
Most schools are characterized by norms of isolation, not collaboration
It takes time (years, not months)
Teachers will make it or break it
What helps teachers change?
  A good reason to change
  Time and resources to change
  A discernable mission
  Meaningful involvement in the change process
  Meaningful involvement of administrators
  Learning together

5. Six strategies of the collaborative planning model for school-to-work Transition (Center on Education and Work)

- Develop applied and integrated curriculum
- Implement developmental career guidance
- Develop work-based learning
- Create articulation between K-12 and postsecondary
- Work in partnership with business, industry, labor, and the community
- Provide staff development activities

For additional information on staff development or assistance with planning and change for school-to-work transition, call Kathleen Paris, Center on Education and Work, UW-Madison, 608-263-9592 or 1-800-446-0399.

APPLIED INTEGRATED CURRICULA
ACTION PLAN FOR FOLLOW UP ACTIVITIES

Rationale

An essential part of the integration process is the follow up activities that will occur after the February workshops and before the June workshop. It is evident that various districts are at different levels of curricular integration. Some have had numerous school or district wide staff development activities and others have had little opportunity to work in this area. To maximize the team spirit within each district, all follow up activities will be coordinated through the district Tech Prep Director. We believe that each district, because of its local autonomy, will conduct integration activities that align with their district philosophy and structure.

Tentative Plan

We propose to schedule mini workshop in each Tech Prep district. The content of the workshop will be entirely dependant on the identified needs unique to the individual district integration process. Times and topics will be tailored so as not to disrupt or conflict with other district activities. It is Stout's intention to work closely with the district Tech Prep Director so that work teams will get optimal benefit from this activity. Scheduling will begin in March and continue into June.

Activity Coordinator

Questions and information for this activity should be directed to:

Mike Galloy
148 Communication Technology Building
Communications, Education and Training
UW-Stout
Menomonie, WI 54751-0790
(715) 232-2163

APPLIED/INTEGRATED CURRICULA
PERSONAL ACTION PLAN

Respond to the following objectives as they relate to the integration activities that you plan to accomplish. With each answer, identify a time frame for implementation.

1. Identify several competencies in your discipline that you believe are the most relevent to the Learner Outcomes.

2. Identify other disciplines that seem to be your most logical partners in an integrated curriculum.

3. Plan an integrated task with each of those partners.

4. Develop a lesson plan that is suitable for delivery of an integrated, authentic task; deliver instruction.

5. Develop a student assessment procedure to assure accomplishment.

6. Critically evaluate the entire activity.

Small Grant Process for Applied/Integrated Curriculum Development

Introduction

This document describes the purpose of the small applied/integrated curriculum development grants and the procedures to be used by the local district/consortium to obtain a grant. **The maximum amount of the grant is $500**. There are 60 grants which will be spread across all consortiums.

Purpose

The purpose of the small grants is to encourage local district teams to implement one or more of the task activities developed at the February workshops.

Fundable Activities

The small grant funds may be used to purchase resources needed to implement the task activities. They may be used to fund teacher salaries or to cover the cost of substitutes' wages. The funds may be used to cover travel costs directly associated with implementing a task activity. For example, they could be used to cover the cost of a field trip to a local business or industry. Funds cannot be used to cover educators' travel costs to attend conventions, conferences, etc. Other allowable expenses are reference materials, supplies for learning activities, and duplicating costs.

Application Procedure

School systems or consortiums that want to apply for a small grant, must fill out the attached form and return it to Mike Galloy at Room 148, Communication Technology Building, UW-Stout, Menomonie, WI 54751. **The application must be received at UW-Stout no later than March 5, 1994**. Notification of award or rejection will be sent to applicants on or before March 24, 1994.

Applicants must describe the purpose and objectives of the small grants well as the activities that will be supported with the availability of the small grant funds. A brief description of how the impacts of the funds will be evaluated along with dissemination activities must be included in the application. Finally, a brief description of how the funds will be used must be included in the request.

If any questions arise during the process of developing the request, contact Mike Galloy at (715) 232-2163, or Alan Gilbertson at (715) 232-1382.

Final Report

Each recipient must file a brief final report that describes the activities that were funded and their impact. **The final report will be due at UW-Stout on or before June 6, 1994**. Payment will be sent shortly after the final report has been received at UW-Stout. Be sure to put a cover sheet on your report. List your team members' names, school and city.

Attachment-Application Form
1/10/94

Applied/Integrated Curriculum Development Small Grant Application

Directions. To apply for an Applied/Integrated Curriculum Development Small Grant, complete this application form and return it to UW-Stout as directed at the bottom of the form. If you need any assistance in completing this form, contact Mike Galloy at (715) 232-2163, or Alan Gilbertson at (715) 232-1382.

A. Applicant Information

1. School: ______________________________ Date: ______________

2. School District: ______________________________

3. School Address: ______________________________

City: ____________________ Zip: ________________

4. Person Preparing Application: ______________________________

5. Phone Number: ____________________ Fax Number: ____________________

6. Your Technical College District: ______________________________

B. Purpose for the Grant. Give one or two sentences to identify the purpose for which the grant funds will be used.

C. Objectives for the Grant. Identify the major objectives that the grant funds will help you achieve.

D. **Activities**. Identify the major activities for which the grant funds will be used. NOTE: The grant funds may not cover the total costs of all the activities.

E. **Evaluation.** Give a brief description of how you will evaluate the impacts of the funds received through this grant.

F. **Dissemination Activities.** Identify how you will inform other teachers, administrators and school board members in your district about the outcomes of your project.

G. **Budget**. Identify how you will use the funds you are requesting.

1. Amount of funds requested. (Maximum amount is $500.00) ____________

2. Budget Items. (Identify how the budget funds will be used. Give the application/activity and the amount of funds assigned to it. For example, "Hire substitute teachers for planning-$240."

3. Time Table. Indicate when the project activities will take place. Indicate the general schedule for your activities, such as, March 15-April 10. (Attach to the proposal)

Submit to: Mike Galloy
Room 148 Comm. Tech. Bldg.
Center for Vocational, Technical and Adult Education
School of Industry and Technology
UW-Stout
Menomonie, WI 54751.
Fax Number: (715) 232-1441

Project Director Signature:____________________________ **Date:**____________

Holiday Inn

Food/Lodging Arrangements Travel Reimbursements

February 1:

a. If you arrived at the motel on February 1, your lodging will be paid through a purchase order by the project.

b. Your evening meal is reimbursable within state guidelines provided you left home prior to 4:30 p.m.

February 2:

a. A breakfast buffet will be provided for you.

b. If you left home prior to 6:00 a.m. on February 2, your breakfast meal will be reimbursed to you within state guidelines provided you ate at a site other than the conference site.

c. Lunch will be provided by purchase order.

d. Dinner will be provided by purchase order.

e. Lodging will be provided by purchase order for your stay at the motel. If you were unable to obtain lodging at the Holiday Inn and had to stay elsewhere, your lodging will be reimbursed provided you attach a hotel receipt to the travel expense form.

f. If you are commuting to and from the conference daily, your mileage will be reimbursed within state guidelines. Meals while driving are not reimbursable.

February 3:

a. A breakfast buffet will be provided for you.

b. Lunch will be provided by purchase order.

c. Dinner will be reimbursed to you provided you will arrive home later than 7:00 p.m.

e. Mileage will be reimbursed for each team of four participants with some exceptions (participants who commute and those who may live some distance from other team members to warrant their driving separately).

UW-Stout Travel Reimbursement Form must be completed and signed for reimbursement for meals and/or mileage.

Sheraton Inn

Food/Lodging Arrangements Travel Reimbursements

February 14:

a. If you arrived at the motel on February 1, your lodging will be paid through a purchase order by the project.

b. Your evening meal is reimbursable within state guidelines provided you left home prior to 4:30 p.m.

February 15:

a. A breakfast buffet will be provided for you.

b. If you left home prior to 6:00 a.m. on February 2, your breakfast meal will be reimbursed to you within state guidelines provided you ate at a site other than the conference site.

c. Lunch will be provided by purchase order.

d. Dinner will be provided by purchase order.

e. Lodging will be provided by purchase order for your stay at the motel. If you were unable to obtain lodging at the Sheraton Inn and had to stay elsewhere, your lodging will be reimbursed provided you attach a hotel receipt to the travel expense form.

f. If you are commuting to and from the conference daily, your mileage will be reimbursed within state guidelines. Meals while driving are not reimbursable.

February 16:

a. A breakfast buffet will be provided for you.

b. Lunch will be provided by purchase order.

c. Dinner will be reimbursed to you provided you will arrive home later than 7:00 p.m.

e. Mileage will be reimbursed for each team of four participants with some exceptions (participants who commute and those who may live some distance from other team members to warrant their driving separately).

UW-Stout Travel Reimbursement Form must be completed and signed for reimbursement for meals and/or mileage.

"See instructions
on back page"

TRAVEL EXPENSE REPORT

Form UW-18 10/91
UNIVERSITY OF WISCONSI

Tvl Exp Amount	F/Y	Fund	Account	Inst	Div	Dept	Act	Class
								1.
								2.
(-) Tvl Adv Amount	TA Req#	Fund	Account	Inst	Div	Dept	Act	Class
		991	000				1	2199

Net Amount 3.

Soc Sec #

Bargaining Unit Code

Headquarters City

Name (Last) (First) (Initial)

Send check to:

Type of Employment (Please Check)

☐ UW Employe ☐ Student ☐ Non-State Employe

☐ State Emp (indicate agency) ____________

Explanations/Justifications/Cost Comparisons

1. PRINT NAME. IF NO EXPENSES, PRIN "NO EXPENSES" IN #2 BELOW NAME.
2. IF EXPENSES, PRINT HOME ADDRESS.
3. PRINT SOCIAL SECURITY NUMBER.
4. COMPLETE TRAVELINFORMATION (DATES OF TRAVEL, ITINERARY, MILEAGE IF YOU ARE DESIGNATED DRIVER FOR TEAM OF 4, AND FOOD EXPENSES).

Month and Day of Travel	Depart Time	Return Time	Official Business Purpose of Trip, Itinerary: From - To Nature of Misc. Expenses, etc.	☒ if Fleet Car	Direct Billed Expenses (omit from total)	Personal Vehicle Miles	Fares (air, train, auto, taxi)	Misc Exp (reg. fee, phone...)	Lodging (☒ if at conf. site)	Breakfast	Lunch	Dinner	Total Expenses
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					Sub Total								

CLAIMANT'S STATEMENT 16.53 Wisconsin Statutes. I declare (under penalties of perjury) this account of travel expenses is accurate and conforms with all applicable University and State regulations. The expenses are actual, reasonable, and were personally incurred in performance of my official duties. No portion of this claim was provided free of charge, covered by a registration fee, previously reimbursed from any other source, or will be paid from any other source in the future.

Claimant's Signature Date Office Phone No.

________ Miles at ________ Per Mile = $________

________ Miles at ________ Per Mile = $________

Mileage Cost $ ________

Grand Total $ ________

Reimbursement Limited To $ ________

I certify that I have reviewed this travel claim and find it to be reasonable and in compliance with established travel guidelines and the mission of this department.

Supervisor Approval Date

I certify that I have reviewed this travel claim and find it to be reasonable and in compliance with established travel guidelines and the mission of this department.

Dean, Director, or ~~Other Approval~~ Date

I certify that I have audited this document for compliance with provisions of the UW System Travel Regulations.

Inst. Pre-Audit Approval Date

ORIGINAL

BEST COPY AVAILABLE

D
P
I

WISCONSIN DEPARTMENT OF PUBLIC INSTRUCTION
VERIFICATION OF EQUIVALENCY CLOCK HOURS
PI-1681 3/85

INSTRUCTIONS: To be completed and maintained by Participant for submittal at time of renewal of 5-year license. Under DPI guidelines, you are responsible for maintaining your own record of verification of equivalency clock hours, and/or transcripts of college credit courses. You will be required to submit such documentation to DPI with your application for renewal of your 5-year license.
PLEASE NOTE: **EQUIVALENCY CREDITS MUST BE EARNED DURING THE 5-YEAR PERIOD IMMEDIATELY PRECEDING THE APPLICATION FOR LICENSE RENEWAL. CREDITS MAY NOT BE BANKED FROM ONE LICENSE PERIOD TO THE NEXT.**

Participant	Social Security or DPI License Number*
Address *Street-City-State-Zip*	

Name of Agency Conducting Program
Agency Address *Street-City-State-Zip*

Title of Program	Date(s) of Program	Number of Clock Hours

EVALUATION OF YOUR PROFESSIONAL GROWTH

Describe how this program has contributed to your professional growth in the following areas:

1. Information/Knowledge Acquired

2. Skills – Developed/Refined

3. Attitudes – Gained/Altered

4. Professional Expertise – Explain plans to implement or apply the knowledge/skill/attitudes gained from this program to your professional responsibilities

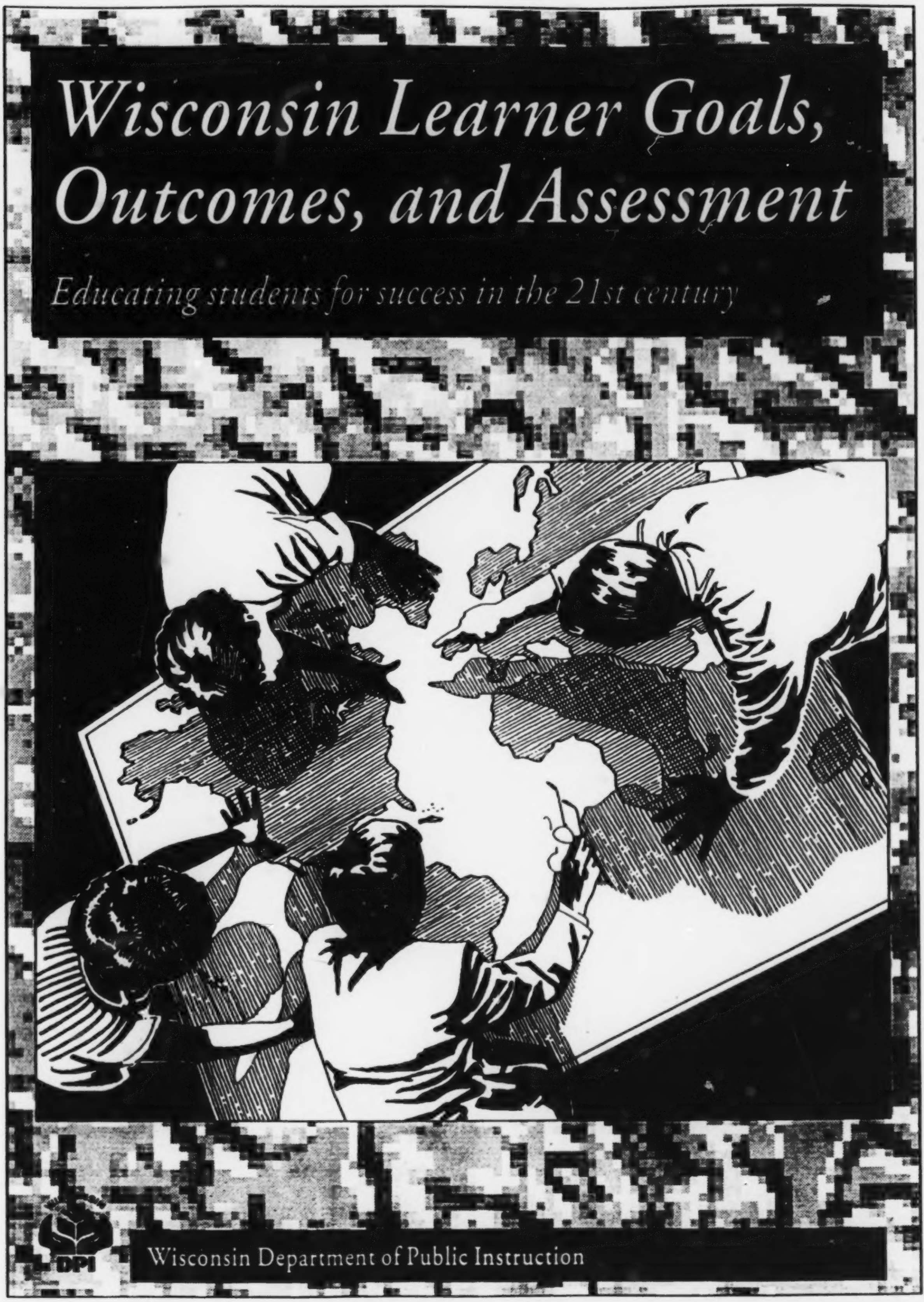
I was in actual attendance at the program sessions for a total of __________ hours. I have completed the evaluation statement above. A false statement may result in the denial of these hours.

Signature of Participant	Date *Mo/Day/Yr.*

*Used only to assure identification, accessibility, and accuracy of records.

AGENCY VERIFICATION

Number of Clock Hours Awarded	DPI Approval Number
Signature of Agency Official Responsible for Verification	Date *Mo/Day/Yr*



Wisconsin Learner Goals, Outcomes, and Assessment

Educating students for success in the 21st century

Wisconsin Department of Public Instruction

Wisconsin Learner Goals, Outcomes, and Assessment: Educating Students for Success in the 21st Century

Wisconsin Department of Public Instruction
Madison, Wisconsin

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P.O. Box 7841
Madison, Wisconsin 53707-7841
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In March 1992, Wisconsin Act 269 established an educational goals-setting process, funding for the development of a comprehensive student assessment system, and provision for an advisory committee to make recommendations about the connection of the goals to the assessment system.

History of Wisconsin Learner Outcomes 3

The events in which Wisconsin citizens participated in the development of the outcomes are listed in chronological order. During the past 18 months, hundreds of Wisconsin citizens contributed to these efforts.

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The 17 learner outcomes, with annotations for each, are listed.

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The recommendations of the State Superintendent's Assessment Advisory Committee outline a pupil assessment system that is linked to Wisconsin's Educational Goals, specifically the first three learner goals, and the Wisconsin Learner Outcomes.

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The Learner, Institutional, and Societal Goals were developed by the Educational Goals Committee which was jointly appointed by the governor and state superintendent. This panel held forums throughout Wisconsin, soliciting comments from educators, parents, and other community members on the goals of education. Using this testimony, the panel developed and, as required by law, submitted Wisconsin's Educational Goals to the governor and state superintendent.

State of Wisconsin
Department of Public Instruction
Mailing Address: P.O. Box 7841, Madison, WI 53707-7841
125 South Webster Street, Madison, WI 53702 (608) 266-3390/(608) 267-2427 TDD

John T. Benson
State Superintendent

Robert H. Gomoll
Deputy State Superintenden

February 1994

An Invitation from State Superintendent John T. Benson

I am pleased to present the 17 Wisconsin Learner Outcomes. The outcomes are the result of Wisconsin Act 269 of 1992, which required the development of statewide educational goals and student assessments. The outcomes serve as a bridge between the state's educational goals, academic content, and student assessment.

The Wisconsin Learner Outcomes have been developed by hundreds of Wisconsin citizens and educators who believe that our children must understand and be able to use the academic skills and knowledge taught in Wisconsin's public schools. The outcomes, as well as the educational goals and assessments, are grounded in the belief that all children, regardless of their abilities or backgrounds, can learn.

The Wisconsin Learner Outcomes, together with high academic standards, will help all children learn to use what they know to meet life's challenges. They will prepare our students with basic academic learning and help them understand how academic learning connects with life, work, and further study.

These learner outcomes will serve as the basis for student performance assessment, which will be part of the Wisconsin Student Assessment System. The first administration of these assessments will be in the fall of 1996. These performance assessments will complement multiple-choice and short-answer tests covering academic knowledge and concepts. We also anticipate that the annual Third Grade Reading Test will continue.

It is now time for communities to take these outcomes and make them work for their children. I encourage community members to work in partnership with their school districts to use these outcomes to enhance their children's academic learning.

During April, the Department of Public Instruction will hold open forums throughout the state to provide an opportunity for all community members to comment on and discuss the outcomes. Please feel free to circulate the enclosed material, and watch for additional information about the dates and locations of the regional forums. These forums are an opportunity to open the educational process and to create partnerships and consensus for the sake of our children.

John T. Benson
State Superintendent

Introduction

Background

During the fall of 1991, the state superintendent, the governor, and various educational groups demonstrated unprecedented collaboration by reaching consensus on a broad set of educational reform initiatives. With the deliberation and passage of Wisconsin Act 269 in March 1992, the legislature became a partner in these far-reaching reforms. These reforms included the establishment of an educational goals-setting process, funding for the development of a comprehensive student assessment system, and provision for an advisory committee to recommend the ways to connect the goals to the assessment system.

Act 269 provided for the broad-based development of statewide educational goals and the design of an assessment system that would measure key learner goals. The statutes purposely refrained from prescribing any requirements for the processes and procedures that schools and districts would employ in order to meet the goals. The state's role was to ensure that goals were established and, in the case of learner goals, to assess student performance related to the first three learner goals.

During the fall of 1992, a committee that included the governor, the state superintendent of public instruction, the president of the University of Wisconsin System, the director of the state Vocational, Technical and Adult Education System, and eight other citizens held public hearings at 13 locations throughout Wisconsin. As an outgrowth of those hearings, the committee formulated 28 educational goals. Ten of the goals focused on expectations for students and, in recognition that societal and institutional support are necessary for quality education, the remaining goals fell into these two categories.

The goals committee specifically stated that the first three learner goals should be the focus of the mandated statewide assessment.

Learner Goals for Assessment

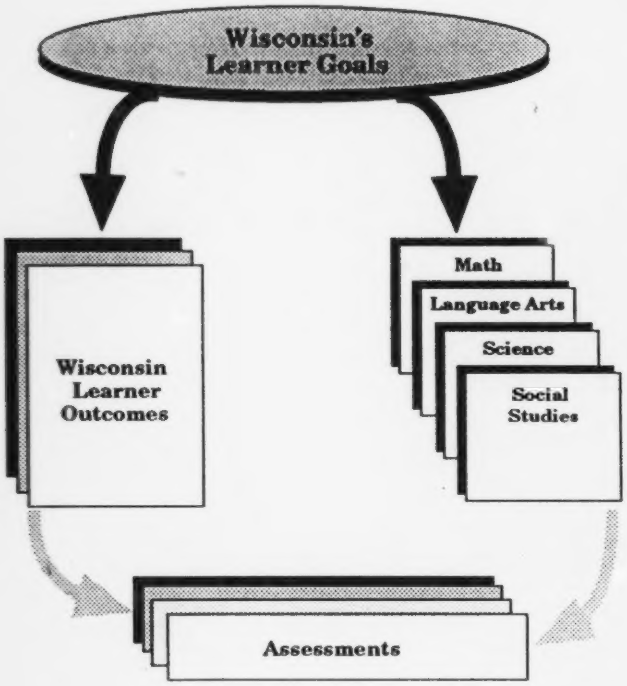
The learner will:

1. **Build a substantial knowledge base.** Students will build a solid knowledge base developed from challenging subject matter in computer/information technology, environmental education, fine and performing arts, foreign language, health, language arts, mathematics, physical education, reading, science, social studies, and vocational education.
2. **Develop thinking and communication processes.** Students will develop a command of thinking processes (analysis, creative thinking, problem solving, decision making, visualizing, concept development) that permit them to interpret and apply the knowledge base. Communication processes (listening, speaking, reading, writing, viewing, image making, and other symbolizing) enable them to communicate thoughts with others.
3. **Apply knowledge and processes.** Students will build upon knowledge and apply learning processes to create new ideas and understandings, enhance human relations, expand awareness, and enrich experiences.

While these learner goals constitute general high expectations for students, they are not specific enough to serve as the basis for either instructional planning or assessment development. For these purposes the Department of Public Instruction decided to develop more concrete outcome statements to serve as the basis for planning curriculum, instruction, and assessment. The first step in making the goals more specific was to develop outcome statements requiring application of academic knowledge and processes. The reason for beginning with outcomes was to clarify the third goal sufficiently to guide curriculum, instruction, and assessment. While it is equally important to have clear statements of knowledge, thinking, and communication processes, existing and emerging academic-content frameworks serve these purposes. Figure 1 shows the relationship between the learner goals, outcomes, academic content, and assessment.

Figure 1

Relationship of Learner Goals, Outcomes, Academic Content, and Assessments



These outcomes are referred to as the *Wisconsin Learner Outcomes*. It is the specific purpose of this publication to describe the outcomes, the process of their development, and their connections to instructional tasks and the assessment system recommended by the legislatively mandated assessment advisory committee. To understand the purpose of these outcome statements, it is critical that the overall context of goals, academic content, and assessments be kept in mind. It should be clear that the intent of these initiatives is twofold: (1) through the learner goals, outcomes, and academic content, to be clear about what is important for children to know and be able to do and (2) by implementation of the assessment system, to provide information about how well students are meeting these expectations.

History of Wisconsin Learner Outcomes

In the early 1990s, failure of educational reforms to correct problems identified years earlier in *A Nation at Risk* led educators to switch their attention from inputs to outputs. Instead of adjusting hours of seat time, accumulation of required credits, class size, and per-student expenditure, they began to focus on improving and assessing what students knew and were able to do. Responding to demands of business, industry, and postsecondary education, they became concerned about whether students could apply what they had learned.

In 1992 the Wisconsin Department of Public Instruction (DPI) started examining lists of educational targets (commonly called "outcomes") to decide which targets should be measured by the assessments required by Wisconsin Act 269. Outcomes on existing lists seemed either too narrow to be meaningful or too broad-based to be assessable and were often isolated from any meaningful context. Most seemed fixed in specific academic-content areas, and few were expressed in ways that knowledge and skills could be meaningfully applied.

To address this situation, John Fortier and Jim Moser, consultants in the DPI's Bureau for Student Assessment, wrote *Targets and Tasks*, a paper examining the relationship of various educational targets to one another and to educational tasks. It also suggested how meaningful outcomes and tasks might be identified.

The Fortier/Moser framework has been applied in a variety of settings to develop the current list of Wisconsin Learner Outcomes. The chronology of that process is described below.

June 1992

The first application of the Fortier/Moser model took place during a week-long institute in Wausau with a group of educators from secondary schools in Wisconsin and the Wisconsin Vocational, Technical and Adult Education (VTAE) system. The focus of this work was on student preparation for associate degree programs in the VTAE system. Participants developed various outcome statements.

July 1992

Nearly 100 individuals representing the major educational interests in Wisconsin gathered to consider the outcomes framework. Given the opportunity to learn about the Fortier/Moser model and apply it to the development of outcomes, this group endorsed the approach for the creation of Wisconsin Learner Outcomes.

October 1992

Twenty secondary school teachers from various subject areas in the Menasha School District investigated the possibility that generic outcomes apply to the variety of subject areas taught in public schools. The teachers developed various outcome statements based on their work.

December 1992

The Department of Public Instruction assembled a cross-disciplinary group representing various academic-content areas, administrators, and persons in private employment. After developing a series of outcomes of their own, the participants reviewed the Wausau and Menasha outcomes, evaluated them, and reduced the total number of outcomes to 23.

December 1992

A group of second-grade teachers reviewed the 23 outcomes to see whether they could be used to develop tasks that would be developmentally appropriate for their students. The teachers found the outcomes very appropriate for K-12 application.

March 1993

A second statewide, cross-disciplinary group of educators and people representing a variety of organizations met. Guided by the state goals and the work of the previous groups, DPI replicated the process initiated in Menasha and refined in December. After developing outcomes, six groups reviewed the work along with the outcomes developed at earlier meetings. The result was a list of 21 outcome statements.

May-June 1993

Four groups of educators representing language arts, science, social studies, and mathematics tested whether the outcomes applied in a variety of subject areas. Overall, they reached consensus that, with slight changes, the listed outcomes were appropriate for each of the four academic subject areas.

August 1993

A team of individuals that had participated in the outcomes development process from its inception met to reconsider the list of 21 outcome statements. Using information from teachers in the subject-specific meetings, the team reduced the number of outcomes from 21 to 17.

Wisconsin Learner Outcomes

The Department of Public Instruction endorses the following learner outcomes, which were developed by hundreds of educators and other community members from throughout the state. In order for students to demonstrate the outcomes, they will need a solid foundation in the academic subjects of language arts, mathematics, science, and social studies. The outcomes serve as a bridge between Wisconsin's Educational Goals, academic content, and student assessment.

1. Identify, develop, evaluate, and apply criteria to ideas, products, and performances of one's self or others.	This outcome requires students to be constructively critical of the work of other persons as well as that produced by one's self. A person should realize when such criticism is objective or subjective. Students should apply criteria developed by themselves as well as those developed by others.
2. Revise a product, performance, system, and idea in response to relevant information.	Relevant information might include additional data, changes in a situation, or feedback from experts, peers, or family members. Although the revision may make the item different than it was before, the intent is that the change results in improvement. The expectation is that students will consider all information presented and use that which will result in improvement.
3. Make informed decisions by examining options and anticipating consequences of actions.	Familiar sayings such as "look before you leap" and "think before you act" capture the essence of this outcome. Students should gather evidence and information relevant to some contemplated action, weigh the pros and cons of the potential results, and then choose the course of action.
4. Achieve desired results by interpreting and executing instructions, plans, models, and diagrams.	This means that students can follow directions in a variety of forms: written, spoken, pictorial, or represented as mathematical symbols. Following directions includes sorting things out when they are not clear as well as evaluating the successful attainment of the desired result. The actual result should be consistent with the intent of the direction-giver.
5. Recognize and devise systems and describe their interdependence.	A system is a set of elements that forms a unit or whole. Examples of systems include a musical composition, a game, a procedure designed to solve mathematics problems, weather, ecosystems, and monetary systems.
6. Create a quality product, process, and performance to meet a need.	This outcome is a tangible or visible thing or event. It includes paintings, musical performances and compositions, athletic performances, poems or essays, novels, or public policy.
7. Respond to the aesthetic and intellectual aspects of an event, performance, and product.	Although similar to outcome No. 6, this outcome focuses on a student's response to something someone else has done. Examples include an opinion, a critique, an essay, and a drawing.

8. Transfer learning from one context to another.	Students should identify similar characteristics of two or more situations, objects, or events. Often these characteristics are not apparent, so students need to be analytical. This outcome also involves finding a practical application for a theory and creating new uses for existing products and applications of ideas.
9. Recognize, define, and solve a problem.	This outcome focuses on situations that are problematic because the solution is not immediately obvious. The student needs to formulate the problem and eliminate irrelevant information. The effective problem solver uses a wide range of strategies and can often identify multiple solutions.
10. Recognize and communicate one's strategies for accomplishing objectives.	Students should reflect upon and explain their own thinking processes. Those approaches should be shared with others.
11. Work effectively in groups to accomplish a goal.	Throughout life—at school, within the family, at work—people must cooperate with others to effectively complete a task or project. This does not imply that working independently is not valued; independent working skills are also necessary.
12. Defend a position by combining information from multiple sources.	The position or point of view being defended could be one's own or that of another person or group. The position may be of a social, political, environmental, economic, or hypothetical nature. Students must gather information from a variety of sources and then blend that information with their own knowledge to create an argument in favor of a position.
13. Develop and test a hypothesis.	A hypothesis is a guess about a rule or relationship among a collection of events, objects, or ideas. Students should devise a plan to identify and collect data, then interpret and use those data to determine whether or not the guess is correct.
14. Recognize when a need for specific information exists and demonstrate the ability to locate, evaluate, and use the relevant information.	Students must be able to consult a recognized authority, to extract information from library sources, and to access electronic data bases. This outcome requires students to consider all information, eliminate that which is irrelevant, and then organize what is left into a usable form.
15. Conceive of places, times, and conditions different from one's own.	This outcome includes real as well as fictional places, times, and conditions. Students should think about life as it existed in the past as well as thinking about how it might be in the future.
16. Identify personal interests and goals and pursue them.	Students should work persistently over time on ideas, activities, projects, and goals that reflect their abilities, talents, and interests.
17. Recognize the influence of diverse cultural perspectives on human thought and behavior.	The term "culture" includes groups that share a common history or have a linguistic, racial, geographic, social, or occupational bond that may affect the way people act. Examples include the civilizations of ancient Greece; the Incan Empire; and Hispanic, African, or Asian cultures.

Wisconsin Student Assessment System

State Superintendent's Advisory Committee
Summary Recommendations

Background

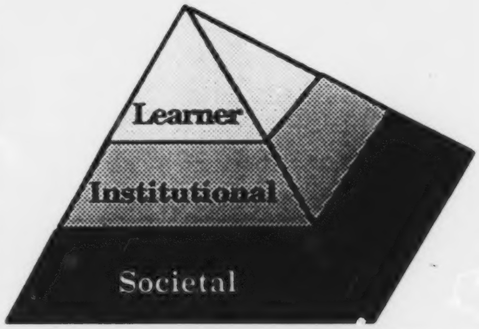
The State Superintendent's Assessment Advisory Committee was appointed in the spring of 1993 to meet the state legislature's mandate to "...advise the State Superintendent on how to utilize school district and state educational goals in the development of a pupil assessment program." The committee developed specific recommendations about the design of a pupil assessment system linked with Wisconsin's Educational Goals.

Relationship of Goals to Assessments

In March 1993, the State Educational Goals Committee established three categories of goals: *learner, institutional support,* and *societal support* goals. The learner goals establish expectations for students. The committee recognized the importance of the context in which formal education takes place and identified the societal and institutional prerequisites for a quality learning environment. Thus, committee members established a set of societal and institutional goals to serve as the foundation for the systematic change in schools and society that is needed to increase student learning and achieve personal and community prosperity in the first half of the twenty-first century. The pyramid in Figure 2 represents the structural relationship of the societal, institutional, and learner goals.

Figure 2

Wisconsin's Educational Goals



While the goals committee members established ten learner goals, they specifically identified the first three of these to serve as the basis for statewide assessment. The assessment committee recommendations envision a system that will provide comprehensive information about student attainment of these three goals.

While the learner goals constitute general expectations for students, they are not specific enough to serve as the basis for assessment development. More concrete outcome statements and specific academic content are needed to guide the development of assessment tasks and examinations. Department of Public Instruction (DPI) staff members have completed the outcome statements and have established preliminary academic content. However, the content frameworks will likely undergo modifications as nationally developed standards for subjects become available.

Learner Goals for Assessment

The learner will:

1. **Build a substantial knowledge base.** Students will build a solid knowledge base developed from challenging subject matter in computer/information technology, environmental education, fine and performing arts, foreign language, health, language arts, mathematics, physical education, reading, science, social studies, and vocational education.
2. **Develop thinking and communication processes.** Students will develop a command of thinking processes (analysis, creative thinking, problem solving, decision making, visualizing, concept development) that permit them to interpret and apply the knowledge base. Communication processes (listening, speaking, reading, writing, viewing, image making, and other symbolizing) enable them to communicate thoughts with others.
3. **Apply knowledge and processes.** Students will build upon knowledge and apply learning processes to create new ideas and understandings, enhance human relations, expand awareness, and enrich experiences.

Assessment

The focus of the assessment system must be on the improvement of student learning. It must also be grounded in the beliefs that all children can learn.

The end of the tenth grade marks a critical point in Wisconsin's conception of the transition from school to work. Up to tenth grade, all students should have pursued the demanding academic work necessary for success in the final, transitional years of their secondary schooling. These last two years will emphasize preparation for technical fields, college, or apprenticeship programs. Pupil assessment should provide information to assist in assuring that the first ten years of schooling prepare students for the challenges of their transitional years. Such information can be used in four ways: for evaluation of curriculum and instruction, demonstration of achievement, planning, and guidance.

First, the assessment information can be used to evaluate curriculum and instruction. Assessment results provide an opportunity to celebrate the successes of our schools and draw attention to effective programs. Assessment results also reveal areas that need improvement and provide direction for increasing program effectiveness.

Second, students' demonstration of meeting the first three learner goals at the end of tenth grade will serve as the bridge connecting them to success in their chosen pursuits in the eleventh and twelfth grades. Assessment information can measure the extent to which students have the knowledge and skills necessary for future success. After tenth grade, students may choose to emphasize technical preparation, apprenticeship activities, or preparation for college in the next phase of their education. The intent is for individuals pursuing one path to be able to enter a different path when they are motivated to do so. Choice would be based on interests and career plans, not on the level of skill attained.

Third, based on assessment results, educators can plan program improvements. The assessment methods can promote better instructional practices. Curriculum, instruction, and assessment should be closely linked so that assessment results will lead directly to interventions that result in program improvements.

Fourth, the assessment can be used as a guidance tool. In conjunction with information about interests, preferred skills, and other factors, students, staff members, and parents can assist students in planning their educational and career paths.

When completely implemented, the assessment system as envisioned by the committee includes three kinds of measures to assess student learning. Traditional examinations with multiple-choice and short-answer questions, termed **"limited-response testing,"** will be used to measure students' understanding of important knowledge and concepts in mathematics, language arts, science, and social studies.

Because many of the critical outcomes of schooling reflect actual pupil performances, the DPI will develop new and innovative methods to assess this learning. Students at specific grade levels will be given **performance assessments**. **Student portfolios** will contain outcomes requiring projects of longer duration. Limited response and performance assessments will be given to all state students, but local school districts will develop and implement portfolio assessments that will be based on statewide guidelines. The annual Third Grade Reading Test will likely continue.

Staff development is a crucial component of the assessment system. Staff development on assessment literacy and on using performance and portfolio methods will provide support for the Wisconsin Student Assessment System, will lead to its institutionalization within schools, and will lead to appropriate uses of assessment results.

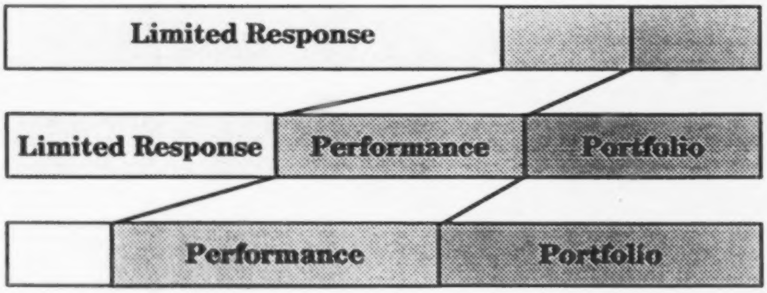
Figure 3 shows how the various types of indicators would be utilized to measure the three Wisconsin learner goals that are to be the focus of assessment. A student's knowledge base (goal 1) would be measured primarily by limited-response examinations. Thinking and communication processes (goal 2) would be tested by each of the methods. Application of knowledge and processes (goal 3) requires performance and portfolio methods.

■ Figure 3

Indicators of the Three Assessment Goals

The learner will:

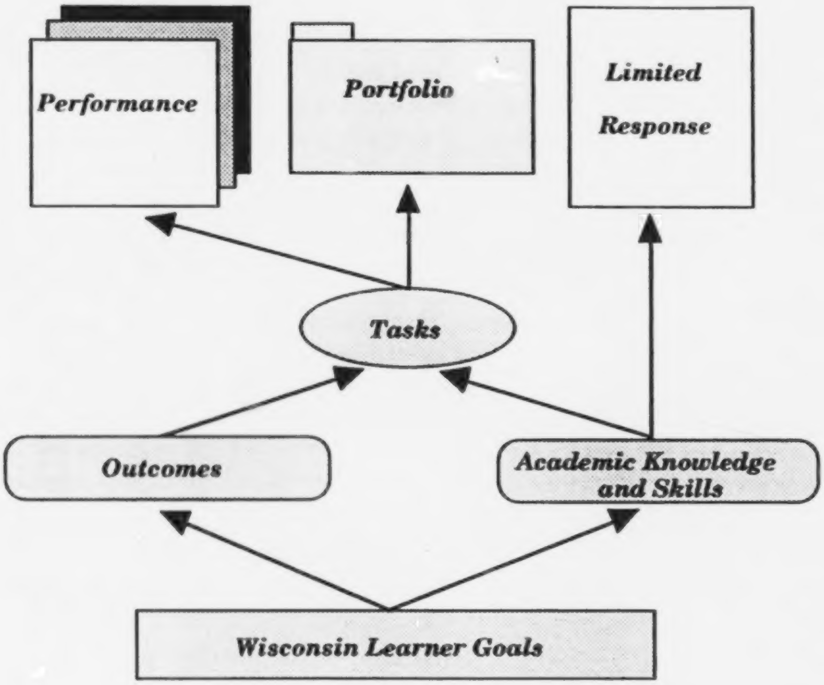
1. Build a substantial knowledge base
2. Develop thinking and communication processes
3. Apply knowledge and processes



The overall charge to the assessment committee was to make recommendations about linking state and district goals to assessments. Figure 4 (page 10) shows the relationship of the proposed assessment system to the state goals.

Figure 4

Linkage of Goals to Assessments


Performance
Portfolio
Limited Response
Tasks
Outcomes
Academic Knowledge and Skills
Wisconsin Learner Goals

Together, the three types of indicators—*limited response, performance*, and *portfolio*—provide the comprehensive information required to assess students' capability to perform the critical outcomes of schooling. Each approach will contribute unique, essential information. It is only through such a comprehensive system that the range and richness of the totality of learning can be measured and evaluated.

Sample Educational Tasks

The following educational tasks are examples of the great variety and number of tasks that reflect the Wisconsin Learner Outcomes. Tasks clarify how learner outcomes are related to academic content. Each outcome requires students to apply knowledge and processes in real-life contexts through the completion of tasks. Students must use what they learn. The academic knowledge and skills displayed in realistic tasks will demonstrate the students' ability to apply what they are learning.

Sample tasks include all grade levels from kindergarten through grade 12. Each of the sample tasks addresses at least one outcome as well as significant academic knowledge and skills.

The outcomes and tasks are related to the first three Wisconsin learner goals:

1. Build a substantial knowledge base,
2. Develop thinking and communication processes, and
3. Apply knowledge and processes.

The products, performances, and processes produced by students should be evaluated against high standards of academic achievement. Educators throughout the state are preparing examples of tasks at all grade levels and across subject areas; however, DPI will not develop mandated state curriculum. The intent is to encourage school districts to use the sample tasks as models. District staff members then may develop tasks that reflect meaningful application of the knowledge and skills students are taught in the local educational program.

Each sample task lists only one or two outcomes, but a task may address one or more additional outcomes. However, the focus is on those outcomes that are primary to each task. If too many are addressed in a given task, the necessary focus may be lost.

It is crucial that students meet high standards for achievement in academic subjects. While tasks should be interesting to students, it is essential that they demand application of rigorous academic content for that grade level. A task must not be an end in itself but must represent the clear application of academic knowledge to a real-life situation.

Appropriate tasks meet three criteria:

- The task requires knowledge of important academic content,
- Accomplishing the task achieves a useful, meaningful purpose, and
- The task has a clear application to a real-life situation.

Measurement

Learner Outcomes Addressed by Task

5. Recognize and devise systems and describe their interdependence.
10. Recognize and communicate one's strategies for accomplishing objectives.

Main Knowledge and Processes Required

Subject Base: mathematics

Understanding the difference between standard and nonstandard measurement units; using measurement; conceiving partial units; communicating mathematics information.

Sample Task *should require high levels of knowledge and a variety of thinking processes and communication skills.*

Students are shown a long object, possibly a length of rope or cable, a long scarf, or a roll of paper toweling. Then they are asked what objects in the room could be used as measurement units—things in terms of which the long object could be measured. They are encouraged to think of unusual possibilities. In groups they are asked to select a measurement unit and find how long the target object is in terms of those units. As a whole class they discuss their results. The teacher leads the discussion toward recognizing the need for units of equal length. For example, if students have chosen shoes as a measurement unit, what is the effect of having shoes of different length? Some students will have chosen a unit that will not allow for an exact number of units. This permits introduction of the concept of fractional units. Finally students are asked to individually write about their measurement results. They may illustrate their answers.

Estimated Time Required for Task

About an hour. The writing might be done on a second day.

Prepared by

Adapted from Stanford, S. "Assessing Measurement in the Primary Classroom." In *Assessment in the Mathematics Classroom.* Reston, VA: NCTM Yearbook, 1993.

Fish Tank

Learner Outcomes Addressed by Task

4. Achieve desired results by interpreting and executing instructions, plans, models, and diagrams.
5. Recognize and devise systems and describe their interdependence.

Main Knowledge and Processes Required

Subject Base: mathematics and science

Problem solving, reasoning, communicating, computing whole numbers, understanding fractions and decimals, measuring, and reading for a purpose.

Sample Task *should require high levels of knowledge and a variety of thinking processes and communication skills.*

The class will be getting a 30-gallon aquarium. The class will have $25 to spend on fish. The students will plan which fish to buy by using the "Choosing Fish for Your Aquarium" brochure to help them choose the fish. The brochure explains the size of the fish, how much they cost, and their needs.

Students choose as many different kinds of fish as they can, and then they write a letter to the principal explaining the fish chosen. In the letter, they

- tell the principal how many of each kind of fish to buy,
- give the reasons why the students chose those fish, and
- show that they are not overspending and that the fish will not be too crowded in the aquarium.

Materials Needed

A brochure that contains information on fish size, needs, cost, and habits.

Estimated Time Required for Task

One class period.

Prepared by

New Standards Project, 1991.

Calories

Learner Outcomes Addressed by Task

3. Make informed decisions by examining options and anticipating consequences of actions.
4. Achieve desired results by interpreting and executing instructions, plans, models, and diagrams.

Main Knowledge and Processes Required

Subject Base: health, mathematics

Understanding the food groups; calculating percentages; computing with whole numbers; reading charts, diagrams, and schedules; and reading for information.

Sample Task *should require high levels of knowledge and a variety of thinking processes and communication skills.*

Ideally a person's diet should get no more than 30 percent of its calories from fats, and it is important to eat balanced meals in which the various food groups are represented. Using the calorie and fat guides provided, students will plan a balanced diet for a single day for a person requiring about 2,000 calories per day. This diet should not have more than 30 percent of its calories from fats. Each student also could determine from charts the number of calories he or she requires per day. Then students could use their own number in completing this task.

Materials Needed

Calorie and fat charts, information on food groups.

Estimated Time Required for Task

One class period.

Prepared by

Health educators, 1993.

Locker Organizer

Learner Outcomes Addressed by Task

2. Revise a product, performance, system, and idea in response to relevant information.
11. Work effectively in groups to accomplish a goal.

Main Knowledge and Processes Required

Subject Base: technology education, art

Observing, analyzing, brainstorming, sketching, and selecting best design; constructing and evaluating prototype; calculating cost; surveying, compiling, and analyzing data, and producing a working drawing using computer technology.

Sample Task *should require high levels of knowledge and a variety of thinking processes and communication skills.*

The commercially produced and recently purchased locker organizers that the students are using fell apart. Divide the class into groups of five or fewer students. Discuss and analyze why the purchased locker organizer failed. Design and develop a plan to produce and market a more reliable locker organizer. After developing the model, construct and test a prototype to share with student council members, who have decided to raise money for a computer by selling locker organizers to students.

Estimated Time Required for Task

Three class periods.

Prepared by

CESA 7 technology education group, 1993.

Land Use

Learner Outcomes Addressed by Task

12. Defend a position by combining information from multiple sources.
15. Conceive of places, times, and conditions different from one's own.

Main Knowledge and Processes Required

Subject Base: social studies, agriculture, communications.

Assessing cause/effect relationships within the context of political, cultural, and economic systems; determining the validity of truth claims by evaluating evidence; considering supply/demand, cost-effectiveness, drainage concerns, environmental impact, impact on local tax base; and acquiring knowledge of graphics and forms.

Sample Task *should require high levels of knowledge and a variety of thinking processes and communication skills.*

Students choose an empty parcel of land close to the high school and with major development potential. In an assigned group, students design and develop a land-use plan that will improve the quality of life in their community. Students prepare an oral and graphic presentation for the city planner.

Estimated Time Required for Task

Five 50-minute class periods.

Prepared by

Social studies group, 1993.

Shower

Learner Outcomes Addressed by Task

10. Recognize and communicate one's strategies for accomplishing objectives.
14. Recognize when a need for specific information exists and demonstrate the ability to locate, evaluate, and use the relevant information.

Main Knowledge and Processes Required

Subject Base: mathematics

Using mathematics to solve problems, finding necessary information, measuring, and devising plans.

Sample Task *should require high levels of knowledge and a variety of thinking processes and communication skills.*

Students are asked how much they think it costs to take a shower. Included with their answer, students should include a written explanation of how they determined their results.

(This task is an example of an unstructured problem. Students will have to decide on such issues as length of shower time and rate of water flow. They will have to find out the city's water rate. They also will need to calculate other costs of showering, making decisions as they proceed.)

Estimated Time Required for Task

Actual work requires about one class period. Gathering necessary data may require out-of-class work.

Prepared by

Adapted from the Connecticut Assessment System.

Questions and Answers

1. What are the Wisconsin Learner Outcomes?

The Wisconsin Learner Outcomes are broad statements that identify what all Wisconsin students should know and be able to do as a result of their educational experience. They have been developed using the following definition.

> *Learner Outcomes* represent complex academic performance involving the integration of knowledge, concepts, and skills applied to the completion of real tasks.

2. Why are these outcomes needed?

These outcomes are needed because academic knowledge and skills are not useful in isolation, but only when applied to real-life situations. Wisconsin's Commission on Schools for the 21st Century realized this need to apply academics to real life and concluded that a statewide set of "essential learner outcomes" was necessary to meet the changing educational needs of our students.

Also, Wisconsin business and industry leaders have expressed a strong interest in having qualified entrants in the workforce. Their comments helped shape the statements about what students should know and be able to do.

These outcomes require students to take the crucial step beyond learning knowledge and skills to the applications of academics to real situations.

3. Why should parents be interested in the Wisconsin Learner Outcomes?

For parents, outcomes describe what is important for their children to be able to do. These statements clarify a critical purpose of school. Mathematics, reading, writing, science, and social studies are at the core of each child's education. However, the ability to apply this knowledge, as exemplified in the outcomes, is essential to economic and personal success in the future.

The outcome statements set clear expectations for students. When teachers and parents meet to discuss student progress, the outcomes will ensure clear understanding of the purposes of classroom activities. Research evidence suggests that this clear understanding of the purposes and goals of classroom activities is crucial to effective learning. Children learn best when teachers, parents, and students all have common ideas about the aims of lessons.

Another value of the outcomes for parents is that they provide the basis for a clearer understanding of assessments. Examinations based on the outcomes further clarify what students are expected to learn. Additionally, the results of the assessment provide feedback that helps parents to understand their children's strengths and weaknesses at a given point in time.

4. How will learner outcomes improve student learning?

The outcome statements will enhance learning in four ways. Effective schools research has demonstrated the importance of having clear, well-understood expectations for students. The outcomes will clarify the purposes of instruction to parents, teachers, and students alike; thus creating a more effective and efficient learning environment.

Another way in which the outcomes can help improve learning is by providing the means to *apply* academic knowledge. Recent research suggests that using and applying knowledge reinforces earlier learning and actually establishes new knowledge and conceptual understanding.

The evidence is that students become much more interested in school when they have a chance to apply knowledge to real-world situations. For example, experience with having students do scientific experiments as part of a test reveals that most students enjoy the activity and are highly motivated to do their best. Thus, teaching to the outcomes should raise motivations that will, in turn, increase learning.

The outcomes and clear expectations for students also provide guidance for assessment. The outcomes provide the basis for developing assessment tasks that do two things. They further clarify what students are expected to learn. In addition, the results of the assessment provide feedback to teachers, students, parents, administrators, and school board members who can then work on weaknesses and improve future programs.

5. Doesn't the state already have educational standards?

Yes, there are state standards that apply to school operations. These standards refer to inputs to the educational process, such as hours of schooling, providing specific programs, and ensuring safe buildings. As such, they are not comparable to outcomes, which refer to the kinds of things students should know and be able to do as a result of the educational process.

6. How were the Wisconsin Learner Outcomes developed?

Hundreds of citizens and educators from all levels and subject areas participated in developing outcomes, which were then reviewed and consolidated into the final 17 outcomes. See detailed history on pages 3 and 4.

7. How will the Wisconsin Learner Outcomes be used at the state level?

The Wisconsin Learner Outcomes will provide leadership and direction for districts as they improve their pre K-12 curriculum, instruction, and assessment programs. The Wisconsin Department of Public Instruction will be using the outcomes to develop the performance component of the Wisconsin Student Assessment System (WSAS).

8. How are the Wisconsin Learner Outcomes related to the educational goals that were developed by the Educational Goals Committee appointed by the governor and state superintendent and submitted to the legislature on September 1, 1993?

There are three kinds of state educational goals: learner, institutional support, and societal support. The Wisconsin Learner Outcomes and the tasks associated with them provide a means of evaluating student's progress toward meeting the first three learner goals: 1) build a substantial knowledge base, 2) develop thinking and communication processes, 3) apply knowledge and processes.

The Wisconsin Student Assessment System is designed to measure these first three goals.

9. What is the connection between the Wisconsin Learner Outcomes and the Wisconsin Student Assessment System (WSAS)?

The Wisconsin Educational Goals Committee established the first three learner goals (see question 8) as the focus for statewide assessment. To develop assessments, these goals need to be amplified. For example, we need to know the specific knowledge, thinking, and communication processes that are important and will be assessed. We must also be clear about how the knowledge and processes are to be applied. The Wisconsin Learner Outcomes describe how students are to apply their knowledge, thinking, and communication capabilities.

The recommendations of the state superintendent's advisory committee envisions three approaches to assessment that, in combination, will include the first three learner goals. The three approaches are limited response, performance, and portfolio. The performance and portfolio assessments will be based on the outcomes coupled with academic content, while the limited-response examinations will be based solely on academic content. Limited-response and performance assessments will be given to all students at selected grade levels. Local school districts will develop and implement their own portfolio assessments that may be based on statewide guidelines.

10. How is the Third Grade Reading Test related to the goals and outcomes?

The Third Grade Reading Test will continue to be given to students annually for the foreseeable future. As a comprehensive measure, this test is most directly a measure of learner goal 2—develop thinking and communication processes. Reading comprehension is essential to accomplish all of the outcomes.

11. How do the Wisconsin Learner Outcomes fit into the School-to-Work effort?

School-to-Work is an initiative that begins when students enter school and takes on additional emphasis in grades 11 and 12. School-to-Work will make available to students in the 11th and 12th grades a variety of pathways to educational and occupational success, including college preparation, technical preparation, and youth apprenticeship opportunities. The goals and outcomes, along with academic knowledge and skills, represent what students will need to succeed on any of these pathways. A student's performance on state and district assessments as well as a review of other evaluative information, student and parent judgment, teacher comments, portfolio review—all of these may help students and parents decide on a particular pathway.

12. What is the difference between the Outcomes-Based Education (OBE) movement and the Wisconsin Learner Outcomes?

First, it should be understood that there are many definitions of outcomes-based education. In fact, each district or state that has adopted an outcomes-based education model has a somewhat different approach.

Fears arise concerning certain features of OBE programs, including a focus on attitudes and values, a retreat from traditional grading, a bias in favor of mastering learning practices, and mandatory compliance with the identified outcomes.

The Wisconsin Learner Outcomes do not focus on attitudes and values, rather they depend upon academic learning and high standards. The outcomes enhance academic content by identifying how students will need to use the knowledge and skills taught in Wisconsin schools. They focus on what students know (subject matter) and how they can demonstrate it (outcomes).

The Wisconsin Learner Outcomes do not call for a particular grading system. They are entirely consistent with either traditional or innovative grading systems, depending on what grading procedures local school districts choose to use.

The Wisconsin Learner Outcomes are inconsistent with mastery learning concepts. Mastery learning tends to isolate small bits of knowledge or skill and repeat instruction in them until they are mastered by all students. The Wisconsin Learner Outcomes serve as a bridge to connect the first three learner goals: substantial knowledge base, thinking and communication processes, and application of knowledge and processes. Wisconsin students must know, communicate what they know, and apply it. The outcomes define the ways in which students do this.

The Wisconsin Learner Outcomes are not mandated. School districts are not required to use, adopt, or adapt any or all of the outcomes. The outcomes are offered to encourage discussion at the local level of what is important for students to know and be able to do. They can be added to, deleted from, or modified to meet the needs of each district's students.

WISCONSIN'S EDUCATIONAL GOALS*

VISION

Wisconsin's public schools exist for all students so they have an equal opportunity to attain their highest level of academic achievement, growth, and development.

Public education is a fundamental responsibility of the state. The constitution vests in the state superintendent the supervision of public instruction and directs the legislature to provide for the establishment of district schools. The effective operation of the public schools is dependent upon a common understanding of what public schools should be and do. Establishing such goals is a necessary and proper complement to the state's financial contribution to education. Each school board should provide curriculum, course requirements, and instruction consistent with the goals established. Parents and guardians of pupils enrolled in the school district share with the state and school board the responsibility for pupils meeting the goals.

Educational goals are not all the same. They differ in who implements them, who or what is directly affected by them, and the immediacy of their impact on the classroom. For convenience, the following goals are divided into three major categories: Learner Goals, Institutional Support Goals, and Societal Support Goals.

LEARNER GOALS

Learner goals refer to our expectations for students. What should students know and be able to do as a result of their time in the educational system? These goals apply to the students rather than the society or the institutions within which they are educated.

Schools exist for students to learn and to reach their full potential. The first three learner goals are the basis for development of a statewide assessment system and provide the basis upon which students achieve the other learner goals.

THE LEARNER WILL:

1. Build a substantial knowledge base.

Students will build a solid knowledge base developed from challenging subject matter in computer/information technology, environmental education, fine and performing arts, foreign language, health, language arts, mathematics, physical education, reading, science, social studies, and vocational education.

2. Develop thinking and communication processes.

Students will develop a command of thinking processes (analysis, creative thinking, problem solving, decision making, visualizing, concept development) that permit them to interpret and apply the knowledge base. Communication processes (listening, speaking, reading, writing, viewing, image making, and other symbolizing) enable them to communicate thoughts with others.

3. Apply knowledge and processes.

Students will build upon knowledge and apply learning processes to create new ideas and understandings, enhance human relations, expand awareness, and enrich human experiences.

4. Acquire the capacity and motivation for lifelong learning.

Students will develop their natural curiosity to acquire habits of inquiry and a love for learning which will motivate them to continue learning throughout their lives.

5. Develop physical and emotional wellness.

Students will acquire the attitudes, knowledge, and habits to grow physically and emotionally healthy, develop self-esteem and confidence, and exhibit a healthy lifestyle.

6. Develop character.

Students will exhibit personal characteristics, such as compassion, conviction, curiosity, ethics, integrity, motivation, and responsibility.

7. Be a responsible citizen.

Students will possess and exercise the knowledge and processes necessary for full participation in the family, civic, economic, and cultural life of a complex interdependent, global society. Students will acquire an understanding of the basic workings of all levels of government, including the duties and responsibilities of citizenship. Students will make a commitment to the basic values of our government, including reverence and respect for and the history and meaning of the U.S. flag, the Declaration of Independence, the U.S. constitution and the constitution and laws of this state, and acquire a knowledge of state, national, and world history.

8. Be prepared for productive work.

Students will acquire knowledge, capabilities, and attitudes necessary to make them contributing members of a dynamic national and world economy and prepare them for the transition from school to work.

9. Respect cultural diversity and pluralism.

Students will demonstrate the knowledge and attitudes necessary to understand and respect individual and multicultural diversity and to work cooperatively with all people.

10. Develop aesthetic awareness.

Students will become aware of and be able to generate those forms of experience that have artistic and aesthetic meaning.

INSTITUTIONAL SUPPORT GOALS

Institutional support goals have to do with the learning context and environment and are the means that support the achievement of learner goals. They include such things as adequate buildings, adequately prepared teachers, reasonable teacher planning time, and appropriate materials. Many of these factors have a direct impact on the classroom and the students. Institutional support goals deal with conditions that are within the control of the school district through its school boards and administrators, assuming that society has provided the necessary resources. If a goal affects the learning environment and is attainable without action by entities outside the local school district, it is called an institutional support goal.

To accomplish these goals and provide appropriate instruction, adequate resources, time, staff development, funding, technology, and facilities must be available. A governance model that encourages local decision making might better ensure that all parties play a role in deciding the allocation of resources.

INSTITUTIONS WILL:

1. Focus on academic achievement.

The primary mission of schools will include a focus on academic results to ensure that learning occurs.

2. Set high expectations for students and schools.

School staffs, parents, and community members must set high expectations so that all students will achieve the expected educational results.

3. Address the needs of all students.

Schools will recognize the widely varying circumstances and backgrounds that children bring to school and will design strategies and alternative programs to meet the changing needs and diverse learning styles of students.

4. Establish a climate of respect.

The school atmosphere will ensure that students and staff are treated with respect and dignity so that they respect others and so that students are better able to learn.

5. Provide a wide range of educational offerings.

Schools will offer a wide range of curricular and co-curricular activities so that students will have additional opportunities to learn teamwork, cooperation, and the application of learning.

6. Provide an active learning environment.

Schools will provide an environment in which students are actively engaged in learning that connects curriculum, instruction, and assessment.

7. Provide a positive physical setting for learning.

Schools will provide safe and stimulating environments conducive to active learning.

8. Meet the needs of professional staff.

Staff will have the resources, preparation, and encouragement to perform successfully. Staff should have adequate time and financial support for professional development, collaboration in course planning, strategy development, and innovation to meet the needs of children.

9. Establish family partnerships.

Schools will create an environment that seeks the active participation of families to maximize learning.

10. Promote collaboration within the school and community.

Schools and school boards will facilitate collaboration between and among all school staff and community members and connect the curriculum and delivery of services.

SOCIETAL SUPPORT GOALS

Societal support goals, like institutional support goals, are the means that support the achievement of learner goals. If met, they ensure that students will have the necessary foundation to learn. They include such things as adequate health care, adequate nutrition, adequate funding for education, and safe, drug-free environments. These goals have significance beyond the educational community. Still, they have a crucial, if indirect, effect on children's learning. If children are not secure, properly nourished, or in good health, they will find it difficult to learn. If a goal requires action by forces outside the school district structure, it is called a societal support goal.

To accomplish these goals, society must make the commitment to invest in a quality education for all children, ensure that schools are staffed by well-prepared and caring personnel, invest its resources and leadership to ensure that children flourish, and provide support for families to provide a nurturing environment for their children.

SOCIETY WILL:

1. Make children its top priority.

Wisconsin will make the education and nurturing of all children its top priority.

2. Provide fair and adequate funding for education.

Society will act to resolve the disparities among school district financial resources needed to ensure that students, regardless of where they live, meet state educational expectations.

3. Provide safe schools, neighborhoods, and communities.

Society will promote drug- and violence-free schools and communities.

4. Ensure that children at all levels are ready to learn.

Society will provide support for parents and families to meet the ongoing nutritional, safety, physical, and emotional health needs of their children. Parents and families will instill in their children the importance of education.

5. Develop partnerships.

Society will develop partnerships between and among educators, students, parents, community, labor, business, industry, other educational institutions, and government agencies to better serve students and families.

6. Provide educational, cultural, and recreational opportunities.

Society will provide educational, cultural, and recreational opportunities that will enhance the quality of life and learning for all citizens.

7. Enhance educational equity through information technology.

Society will provide the necessary resources for schools to capitalize on information technologies such as telecommunications and computer networks to extend curriculum by using delivery systems such as distance learning.

8. Support local decision making.

The primary mission of state educational governance will be to support local districts, allow maximum flexibility for local decision making and innovation, and employ reasonable measures of accountability. The primary indicator of district effectiveness shall be academic results.

Evaluation

Applied/Integrated Curricula Workshop

Stevens Point Holidome
February 2 and 3, 1994

1. Check the following which most accurately describes your primary place of employment (check one):

1._____DPI
2._____Secondary School System
3._____University System
4._____VTAE College
5._____WBVTAE
6._____Other

2. Check the area that most accurately describes your position:

1._____Academic Teacher
2._____Curriculum Coordinator
3._____District Administrator/Superintendent
4._____General Education Instructor
5._____Guidance
6._____LVEC/Tech Prep Coordinator
7._____Principal/Assistant Principal
8._____Special Needs
9._____Vocational Teacher
10._____Other

General Session Evaluation

Please comment on the usefulness of the information/activity for your school's applied/integrated curricula. For each of the items, circle the number that corresponds to the usefulness of the session for you. Feel free to make additional comments.

5 - Extremely Useful (EU)
4 - Useful
3 - Unsure (?)
2 - Not Useful
1 - Definitely Not Useful (DNU)

Wednesday, February 2	EU	4	?	2	DNU
3. Putting the Pieces Together (Best-Louther/Paris)	5	4	3	2	1
4. Targets and Tasks--John Fortier and Jim Moser	5	4	3	2	1
5. Group 1 Activity--Authentic Task Development by Discipline	5	4	3	2	1

3. Comments____
____
____

4. Comments____
____
____

5. Comments____
____
____

EU 4 ? 2 DNU

6. Group 2 Activity--Developing Authentic Tasks by Interdisciplinary Groups 5 4 3 2 1
Comments____________________________________

7. Dinner Speaker--Kathleen Paris 5 4 3 2 1
Comments____________________________________

Thursday, February 3

8. Group 3 Activity--Authentic Task Development by Interdisciplinary Groups 5 4 3 2 1
Comments____________________________________

9. Group 4 Activity--Authentic Task Development by School Teams 5 4 3 2 1
Comments____________________________________

Overall Applied/Integrated Curricula Workshop

10. Facility comments (meals, breaks, sleeping rooms, conference rooms, temperature, hotel staff, etc.) 5 4 3 2 1
Comments____________________________________

11. Overall, how would you rate the Applied/Integrated Curricula Workshop? 5 4 3 2 1

12. Any other comments____________________________________

Thank you for taking the time to complete this!
Please Return Survey to Facilitators or Drop in Box at Registration Table.

Evaluation

Applied/Integrated Curricula Workshop

Madison Sheraton Inn
February 15 and 16, 1994

1. Check the following which most accurately describes your primary place of employment (check one):
   - 1._____DPI
   - 2._____Secondary School System
   - 3._____University System
   - 4._____VTAE College
   - 5._____WBVTAE
   - 6._____Other

2. Check the area that most accurately describes your position:
   - 1._____Academic Teacher
   - 2._____Curriculum Coordinator
   - 3._____District Administrator/Superintendent
   - 4._____General Education Instructor
   - 5._____Guidance
   - 6._____LVEC/Tech Prep Coordinator
   - 7._____Principal/Assistant Principal
   - 8._____Special Needs
   - 9._____Vocational Teacher
   - 10._____Other

General Session Evaluation

Please comment on the usefulness of the information/activity for your school's applied/integrated curricula. For each of the items, circle the number that corresponds to the usefulness of the session for you. Feel free to make additional comments.

5 - Extremely Useful (EU)
4 - Useful
3 - Unsure (?)
2 - Not Useful
1 - Definitely Not Useful (DNU)

Tuesday, February 15	EU	4	?	2	DNU
3. Targets and Tasks--John Fortier and Jim Moser	5	4	3	2	1
Comments____ ____ ____					
4. Group 1 Activity--Authentic Task Development by Discipline	5	4	3	2	1
Comments____ ____ ____					
5. Wisconsin Learner Goals, Outcomes, Assessments (Sue Grady)	5	4	3	2	1
Comments____ ____ ____					

EU 4 ? 2 DNU

6. Group 2 Activity--Developing Authentic Tasks by Home Teams 5 4 3 2 1
Comments____
____
____

Wednesday, February 16

7. Group 3 Activity--Authentic Task Development by Home Teams 5 4 3 2 1
Comments____
____
____

Overall Applied/Integrated Curricula Workshop

8. Facility comments (meals, breaks, sleeping rooms, conference rooms, temperature, hotel staff, etc.) 5 4 3 2 1
Comments____
____
____

9. Overall, how would you rate the Applied/Integrated Curricula Workshop? 5 4 3 2 1

10. What did you come away with as a result of your participation in this workshop?____
____
____
____

11. Any other comments____
____
____

Thank you for taking the time to complete this!
Please Return Survey to Facilitators or Drop in Box at Registration Table.

CONFERENCE PROCEEDINGS

AUTHENTIC TASK DEVELOPMENT RECORDS

Selected from
Those Submitted
By Participants
At the

INTEGRATED AND APPLIED CURRICULA CONFERENCES

February 2-3 and 15-16, 1994

Sponsored By

DEPARTMENT OF PUBLIC INSTRUCTION
AND
WISCONSIN TECHNICAL COLLEGE SYSTEM

Coordinated By

CENTER FOR
VOCATIONAL, TECHNICAL
AND ADULT EDUCATION
UNIVERSITY OF WISCONSIN-STOUT

FOREWORD

During the month of February, 1994, teams of teachers from across the state participated in Integrated and Applied Curriculum Workshops. The focus of the workshops was twofold: (1) to increase awareness of the Wisconsin Learner Goals, Outcomes, and Assessment and (2) to have teams of teachers, made up of secondary, postsecondary and university personnel, develop authentic tasks that will enable students to perform well on Wisconsin's new performance based assessments. Over 500 teachers, administrators, guidance personnel, and curriculum specialists attended the 2 workshops that were held. Team members spent many hours developing integrated and applied tasks that are tied to the 17 Learner Outcomes and could be used in their classrooms.

Participants of the workshops worked very hard and developed a number of tasks that would fill up several volumes of this booklet. They are to be congratulated for their diligence in working with some very demanding information and producing such a great number of quality authentic tasks.

A review team struggled to identify a representative sample of authentic tasks to reproduce and provide for workshop participants. This booklet is the result of that effort. The tasks found on the succeeding pages are a useful resource for developing integration ideas, other tasks, or as a starting point for implementation of integrated and applied activities.

The first part of the booklet contains tasks that were developed by discipline specific teams. For example, Language Arts teams, Vocational Education teams, or Mathematics Teams developed authentic tasks that are tied to the 17 Learner Outcomes. The second part of the booklet includes authentic tasks that were developed by interdisciplinary teams. Teams were randomly put together with no intent of joining specific disciplines. Some of the tasks were developed by teams coming from one school, other tasks were developed by teams representing various schools. In all cases, the tasks contained in the second part of this booklet are the result of diverse disciplines designing instructional tasks that combine various knowledge and skills into an integrated and applied activity that will better prepare Wisconsin's students for their future.

Wisconsin Learner Outcomes

The following annotated list of Wisconsin Learner Outcomes is the result of a cooperative effort by several hundred Wisconsin educators, parents, and business persons. They developed the Outcomes over a period of almost two years using the Wisconsin Educational Targets Model as the basis for the developmental efforts.

1. **Identify, develop, evaluate, and apply criteria to ideas, products, or performances of one's self or others.**

   This outcome speaks to the practice of being constructively critical of the work of other persons as well as that produced by one's self. A person should realize when such criticism is "objective," based upon analytical factors, and when it is "subjective," based upon emotional or personal factors. Students should apply criteria developed by themselves as well as those developed by others.

2. **Revise a product, performance, system, or idea in response to relevant information.**

   Relevant information might include additional data, changes in a situation, or feedback from experts, peers, or family members. Although the revision may simply result in a change that makes the item in question different than it was before the change, the basic intent is that the change results in an improvement. The expectation is that students will sort through all information presented and choose to use only that which will result in improvement.

3. **Make informed decisions by examining alternatives and anticipating consequences of actions.**

   Familiar sayings such as "look before you leap" and "think before you act" capture the essence of this outcome. A student should gather evidence and information relevant to some contemplated action, weigh the pros and cons of the potential results of that action, and then choose the proper course of action.

4. **Achieve desired results by interpreting and executing instructions, plans, models, and diagrams.**

   Essentially this means that a person can follow directions in any form: written, spoken, pictorial, or represented as mathematical symbols. Following directions appropriately includes sorting things out when they are not clear as well as evaluating the successful attainment of the desired result. In most cases, the actual result is consistent with the wishes of the direction-giver as well as the direction-follower.

5. **Recognize and devise systems and describe their interdependence.**

   A system is a set of elements so related as to form a unit or organic whole. A closed system is orderly and predictable. Open systems are self-organizing and essentially unpredictable because they are sensitive to many kinds of feedback. Examples of the former include a musical composition, a game complete with its rules, a procedure designed to solve a whole collection of similar mathematics problems, and mechanical devices. Social systems, whirlpools, weather, and human beings are examples of open systems.

6. **Create a quality product, process, or performance that will meet a need.**

   Although similar to the previous outcome, this outcome is distinguished from it by being a tangible or visible thing or event. It can also include things with an aesthetic, intellectual, or emotional content such as paintings, musical renditions, an athletic performance, poems or essays or a novel, making personal and public policy, or an elegant approach to solving a mathematics problem.

7. **Respond to the aesthetic, intellectual, and emotional aspects of an event, performance, or product.**

   This response might take the form of some new product or performance. The creative arts such as acting, performing musical compositions, and orally interpreting literature would be examples of a response.

8. **Transfer learning from one context to another.**

The student should identify common characteristics of two or more situations, objects, events, or persons. Often these common characteristics lie below surface features, so one needs to be analytical. Another manifestation of this outcome is finding a practical application for a theory. This outcome also involves imagining new uses for existing products and new applications of ideas.

9. **Recognize, define, and solve a problem.**

This outcome includes differentiating between routine situations and those that are truly problematical in that the solution path is not immediately obvious. Often, the situation is ill-defined; the student needs to formulate the problem and eliminate irrelevant information. An effective problem solver has a wide repertoire of strategies and can often identify multiple solutions and/or processes.

10. **Recognize and communicate one's strategies for accomplishing objectives.**

Students should think and reflect upon their own thinking processes and thus improve them. Those approaches should be shared with others.

11. **Work effectively in groups to accomplish a goal.**

The changing workplace often demands that workers collaborate with fellow workers. However, this does not imply that working independently is not valued

12. **Defend a position by integrating information from multiple sources.**

The position or point of view being defended could be one's own or that of another person or group. The position can take the form of some controversial issue of a social, political, environmental, economic, or hypothetical nature. A key word here is "integrating." Students must gather solid information from a variety of external sources and then blend that information with their own personal knowledge base and frame of reference to create an informed argument in favor of a position, point of view, or issue.

13. **Develop and test a hypothesis.**

A hypothesis is a conjecture about a rule or relationship among a collection of events, objects, ideas, or persons. Students should devise a plan to identify and collect data, then interpret and use that data to determine whether or not the conjecture is true.

14. **Recognize when a need for specific information exists and demonstrate the ability to locate, evaluate, and focus that information.**

It is rare for people to be in a situation in which they know all there is to know about that situation. They have to efficiently avail themselves of needed information, that is to consult a recognized authority, to extract data from library sources, or to access electronic data bases. However, in this information age, information overload frequently occurs. Thus, this outcome requires students to sort through all information, eliminate that which is irrelevant to the situation at hand, and then organize what is left into a usable form.

15. **Conceive of places, times, and conditions different from one's own.**

While imagination and creativity are inherent in this outcome, it encompasses real as well as fictional places, times, and conditions. One should conceive of life as it actually existed in the distant past as well as envisioning how it might be in the distant future. For example, "What was life in Wisconsin like in 1848?" or "What might it be like in 2048?" Students should think of themselves in environments foreign to their actual existence but very real to others' experience.

16. Identify compelling personal interests and goals and pursue them.

Students should work persistently over an extended period of time on ideas, activities, projects, and goals that reflect their own personal abilities, talents, and interests and not just those imposed by others.

17. Recognize the influence of diverse cultural perspectives on human thought and behavior.

The term "culture" is taken in the broadest sense to encompass groups that share a common history or have a linguistic, racial, geographic, or social bond affecting the way they act and their view of the world. Examples include the civilizations of ancient Greece; the Incan Empire; and Hispanic, African, or Asian cultures.

INTEGRATED AND APPLIED CURRICULA

AUTHENTIC TASKS

DEVELOPED BY

DISCIPLINE SPECIFIC TEAMS

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Revise a product, performance, system, or idea in response to relevant information.

2. **Primary Enablers required (Include "home" of the task):** Science

Problem identification, develop, construct a test.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

You are an entrant in the 3rd annual international paper airplane fly-off. Your task is to revise one of the provided airplane types provided to achieve the maximum horizontal distance. Upon conclusion, introduce the principles of aerodynamics.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

How far did it go? Why did this airplane fly the best?

5. **Desirable Task Characteristics: (Check all that apply)**

- ✓ **a. authenticity**
- ✓ **b. integration**
- ✓ **c. collaboration**
- ✓ **d. transfer**
- ___ **e. tools and tech.**
- ___ **f. multiple Intell.**
- ✓ **g. duration**
- ___ **h. time**
- ___ **i. sense of culture**

6. **Estimated time required for task:**

One class period.

7. **Prepared by:**

Science

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Revise a product, performance, system, or idea in response to relevant information.

2. **Primary Enablers required (Include "home" of the task):** Tech. Ed.

Sketch and select best design, construct and evaluate prototype, calculate cost, produce working drawings.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

Company ABC sells CDs. Packaging presently is for 1 through 6 CDs. Redesign packaging for a 7th CD because Company ABC is running a promotion "Buy 6, Get 1 Free." Produce working drawing (CAD), build prototype, graphic design (point of purchase), calculate cost of increase of shipping and materials.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

____a. authenticity
____b. integration
____c. collaboration
____d. transfer
____e. tools and tech.
____f. multiple Intell.
____g. duration
____h. time
____i. sense of culture

6. **Estimated time required for task:**

7. **Prepared by:**

Jeff Loose, Tom Hilts, and Lloyd Tindall

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Revise a produce, performance, system, or idea in response to relevant information.

2. **Primary Enablers required (Include "home" of the task):** Chemistry, Physical Science, Family & Consumer Education.

Observing, analyzing, brainstorming, researching, evaluating the best application or methods of removing stains from carpets.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

Many homeowners have problems removing gum and fruit juice stains from carpets. They try commercial rug shampoo, which often fails. Research methods of removing stubborn substances from carpets. Describe the chemical and physical principles involved in each method. Also, test each method. Develop a written report on your test results.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

_____a. authenticity
_____b. integration
_____c. collaboration
_____d. transfer
_____e. tools and tech.
_____f. multiple Intell.
_____g. duration
_____h. time
_____i. sense of culture

6. **Estimated time required for task:**

7. **Prepared by:**

Bob Huberty, New Berlin Eisenhower High School
John Corbin, Kettle Moraine High School

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

   Revise a product, performance, system, or idea in response to relevant information.

2. **Primary Enablers required (Include "home" of the task):**

   Language arts, composition, computer skills, organization and decision-making. Communications (English) and Business Education.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

   Yesterday, you developed a generic resume. Today, you will look through the employment ads that are available here and find one that is in line with your career plans. Using the ad you are to revise your resume to meet the requirements of the job. At this time, it will be necessary to include your career goal.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

   ____a. authenticity
   ____b. integration
   ____c. collaboration
   ____d. transfer
   ____e. tools and tech.
   ____f. multiple Intell.
   ____g. duration
   ____h. time
   ____i. sense of culture

6. **Estimated time required for task:**

   Two to three days.

7. **Prepared by:**

   Edwina Campbell and Joan Lemke

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Revise a produce, performance, system, or idea in response to relevant information.

2. **Primary Enablers required (Include "home" of the task):** Music, Business Education and Family & Consumer Education.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

You have recently purchased a restaurant that went bankrupt. After analyzing the factors that contributed to their business failure, you've identified lack of a unifying theme designed to attract customers as one reason for the failure. Your task is to select a theme for your restaurant that would attract enough customers to keep the business afloat. State the theme and then describe the food you would select for your menu, the color scheme, the furniture, the lighting and the music you would choose. Present your concept to the class. Classmates will give a written or oral critique. From these critiques, revise your concept.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

____a. authenticity
____b. integration
____c. collaboration
____d. transfer
____e. tools and tech.
____f. multiple Intell.
____g. duration
____h. time
____i. sense of culture

6. **Estimated time required for task:**

Four to five hours.

7. **Prepared by:**

Nancy Becker and Kim Barbeau

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Revise a product, performance, system, or idea in response to relevant information.

2. **Primary Enablers required (Include "home" of the task):** Ed. for Employment.

Analyze, brainstorm and draft a new letter of application to meet needs of a new job. Produce a final letter using word processing equipment.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

You recently sent a letter of application for a position that went unanswered. Today, look through the newspaper and select a new ad that you are also qualified for. Analyze your current letter, revise, improve, and adapt that letter to meet the demands of the new job. Produce your final copy using word processing equipment.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

✓ a. authenticity
✓ b. integration
____c. collaboration
✓ d. transfer
✓ e. tools and tech.
✓ f. multiple Intell.
____g. duration
✓ h. time
____i. sense of culture

6. **Estimated time required for task:**

One to two class periods.

7. **Prepared by:**

Applied academic team

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

   Revise a product, performance, system, or idea in response to relevant information.

2. **Primary Enablers required (Include "home" of the task):**

   Communication skills, Writing process: letter-writing style, research skills. Collect and analyze data through surveys and legal research, community awareness, gender equity.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

   You have read a classmate's letter to the school newspaper objecting to the hat ban in your school. Write a response to this letter stating your position on this issue and substantiating/supporting this opinion with data.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

   ✓ a. authenticity
   ✓ b. integration
   ____ c. collaboration
   ✓ d. transfer
   ✓ e. tools and tech.
   ✓ f. multiple Intell.
   ____ g. duration
   ____ h. time
   ✓ i. sense of culture

6. **Estimated time required for task:**

   Five class periods.

7. **Prepared by:**

   Communications

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Revise a product, performance, system, or idea in response to relevant information.

2. **Primary Enablers required (Include "home" of the task):**

Family & Consumer Education. Business Education..

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

You have just inherited an apartment building. Present tenants have very general, verbal leases. You need to study the lease agreements and make a list of your expectations for the tenants and their behavior. Investigate legality of each lease provision and how it affects tenants and landowner.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

____a. authenticity
____b. integration
____c. collaboration
____d. transfer
____e. tools and tech.
____f. multiple Intell.
____g. duration
____h. time
____i. sense of culture

6. **Estimated time required for task:**

7. **Prepared by:**

Doris Murphy and Marcia Ranke

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Revise a product, performance, system, or idea in response to relevant information.

2. **Primary Enablers required (Include "home" of the task):** Tech. Ed.

Measurement and tolerance; time study; safety; machine knowledge; graphic communications; production methods; quality control/statistics; materials/processes; mass production concepts.

3. TASK: **(Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

Your task as a production engineer is to redesign a jig, fixture, or holding device to improve the quality and productivity of a specific process on an assembly line. You are not limited to the use of the present production machine. Evaluate the use of other production methods. Keep in mind that your objective is the improvement of both quality of the part and improved productivity.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

_____a. authenticity
_____b. integration
_____c. collaboration
_____d. transfer
_____e. tools and tech.
_____f. multiple Intell.
_____g. duration
_____h. time
_____i. sense of culture

6. **Estimated time required for task:**

Two class periods.

7. **Prepared by:**

Austin Winsor, North Crawford High School
Jim Discher, Darlington High School

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Revise a product, performance, system, or idea in response to relevant information.

2. **Primary Enablers required (Include "home" of the task):**

Algebra - coordinate geometry, statistics.
Biology - population ecology.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

You and your colleague are staff members of the Wildlife Research Center. You are to collect population data for the bald eagle before the ban on DDT took effect. Plot the data, find the best fit line, write an equation and predict the population of bald eagles 10 years beyond the ban, assuming no restrictions on DDT usage. Revise your graph using data on the bald eagle population since the ban. Again, plot the new data on the same graph, find the best fit line, write an equation and make a prediction on the bald eagle population in 10 years.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

Get into groups and check your graphs and equations using a graphics calculator. Publish your findings in a summary report to your research agency, make sure you compare populations.

5. **Desirable Task Characteristics: (Check all that apply)**

_____a. authenticity
_____b. integration
_____c. collaboration
_____d. transfer
_____e. tools and tech.
_____f. multiple Intell.
_____g. duration
_____h. time
_____i. sense of culture

6. **Estimated time required for task:**

One week.

7. **Prepared by:**
Susan DeRoche, Manitowoc-Lincoln High School
Chris Stewart, Ripon High School
Doris Nemacheck, Brown Deer High School

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Revise a product, performance, system, or idea in response to relevant information.

2. **Primary Enablers required (Include "home" of the task):**

Family & Consumer Education, Art, English, Communications.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

1. To create a 60 second commercial promoting the positive or negative selling points of one of their parents' career.
2. To decide which clothing styles, colors, etc. will create the psychological climate to promote your selling point.
3. To design and create the set that will capture the attention of the viewer, inform them what the entails or products the career creates.
4. To write a script for persuasive speaking pointing out the positive and negative points of the career.
5. To use video technology to film the commercial using dubbing, close-up and presentation skills.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

____a. authenticity
____b. integration
____c. collaboration
____d. transfer
____e. tools and tech.
____f. multiple Intell.
____g. duration
____h. time
____i. sense of culture

6. **Estimated time required for task:**

One week.

7. **Prepared by:**

Marcia Nickols and Sharon Ennis

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Revise a product, performance, system, or idea in response to relevant information.

2. **Primary Enablers required (Include "home" of the task):**

Technology Education: Graphics Arts
Math

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

You need to print 1,200 business cards for a local company. The available paper stock is 25 1/2 x 30 1/2. The final card size will be 2 x 3 1/2. Your pressman will print this 4 up (4 x 7). Using the vertical and diagonal method of paper cutting, what is the least amount of full sheets that will be needed to produce the 1,200 finished cards.

After running this job with the available card stock, you find your press must use short grain stock. Does this affect how many sheets you will need for this project.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

_____a. authenticity
_____b. integration
_____c. collaboration
_____d. transfer
_____e. tools and tech.
_____f. multiple Intell.
_____g. duration
_____h. time
_____i. sense of culture

6. **Estimated time required for task:**

One class period.

7. **Prepared by:**

Jim Bonini and Ron Moreno

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Revise a product, performance, system, or idea in response to relevant information.

2. **Primary Enablers required (Include "home" of the task):**

Foreign Language - Giving directions, map symbols, cultural facts, subway system, prepositions of place.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

Students are given maps of any Hispanic city/subway system. Their leader has given you a list of places she would like you to visit during your free time. (Supply list - stores, monuments, parks, etc.) She also outlines the route she usually takes to get from Point A to Point B. (Teacher's routes should be unusually long and obviously not well thought out.) As student studies map in pairs or groups, he notices that there is a shorter route. He should work with his partner and search for the most direct route to the attraction. He will then report back (in the target language) what he considers to be the best way to get to the attraction.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

____a. authenticity
____b. integration
____c. collaboration
____d. transfer
____e. tools and tech.
____f. multiple Intell.
____g. duration
____h. time
____i. sense of culture

6. **Estimated time required for task:**

One to two class periods, depending on class size.

7. **Prepared by:**

Bridget Bergwall

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Revise a product, performance, system, or idea in response to relevant information.

2. **Primary Enablers required (Include "home" of the task):**

Physics: Recognizing the importance of Bernoulli's Principles as it applies to life.
Math: Measuring weight, frontal drag - lift. Calculate optimal values of lift to weight and percent of change.
Technology: Use of shaping tools and operation of wind tunnel - analysis of computer printout.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

You and a partner will be given a block of styrofoam (1.8cm x 5.0cm x 7.5cm). It will be weighed and placed in a wind tunnel to show the "base value" of lift and frontal drag. You must revise the block into a more aerodynamic shape (less frontal drag and more lift). It will then be tested in the wind tunnel and displayed to the entire class with a computer print-out of the results. You will then be given the choice of (1) making no further improvements, (2) modifying your shape to improve it, or (3) shape a new block from "scratch." Each shape will be given a final test in the wind tunnel. All shapes will be displayed with test results. A written report (limited to one page) and a short oral report to the class will be given explaining your design and thinking behind your modifications. You are to calculate the percent improvement of life and reduction of frontal drag for each model from the base value.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

____a. authenticity
____b. integration
____c. collaboration
____d. transfer
____e. tools and tech.
____f. multiple Intell.
____g. duration
____h. time
____i. sense of culture

6. **Estimated time required for task:**

Three days.

7. **Prepared by:**

Jay Zimmerman and Anna Peterson, Brookfield Central High School

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Revise a product, performance, system, or idea in response to relevant information.

2. **Primary Enablers required (Include "home" of the task):** Business Education.

Computer literacy, word processing, keyboarding, career decision-making & marketing skills, English - written communication skills and mechanics of writing.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

You are unemployed. You must first look through the want ads and find a job you are interested in and believe you would be qualified for. Now, using your initial resume that you have already completed, modify (customize) it in order to make yourself more marketable in the area you have chosen with your ad.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

✓ a. authenticity
✓ b. integration
___ c. collaboration
✓ d. transfer
✓ e. tools and tech.
✓ f. multiple Intell.
✓ g. duration
✓ h. time
___ i. sense of culture

6. **Estimated time required for task:**

Two Days

7. **Prepared by:**

Vocational Education

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

   Revise a product, performance, system, or idea in response to relevant information.

2. **Primary Enablers required (Include "home" of the task):** Technology Education.

   Recognize importance of design in relationship to function. Math - basic measurement (linear, volume). Science - center of gravity. Environmental impact - safety.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

   The cafeteria has just purchased long-stem glasses that frequently tip over. Divide into groups of two: discuss and analyze the design of the glass. Develop a plan to redesign the glasses to prevent tipping. Write an analysis of both the original and the "improved" design emphasizing the differences in design for the same function.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

   _____a. authenticity
   _____b. integration
   _____c. collaboration
   _____d. transfer
   _____e. tools and tech.
   _____f. multiple Intell.
   _____g. duration
   _____h. time
   _____i. sense of culture

6. **Estimated time required for task:**

7. **Prepared by:**

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

   Revise a product, performance, system, or idea in response to relevant information.

2. **Primary Enablers required (Include "home" of the task):**

   Survey and compilation of socio-economic differences in audience. (Data base, Language Arts)

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

   You've got an adult audience whom you inform about the harmful effects of smoking. You must now revise this speech to address the different socio-economic needs of a high school teen-age audience.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

   ✓ a. authenticity
   _____ b. integration
   _____ c. collaboration
   ✓ d. transfer
   ✓ e. tools and tech.
   _____ f. multiple Intell.
   _____ g. duration
   ✓ h. time
   ✓ i. sense of culture

6. **Estimated time required for task:**

   One week.

7. **Prepared by:**

   Language Arts

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

   Revise a product, performance, system, or idea in response to relevant information.

2. **Primary Enablers required (Include "home" of the task):**

   Communication, Evaluation, Reading.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

   Demonstrate your understanding of Tom Sawyer's keen insight of human nature in Chapter 2 by using this same ability in dish washing. For one week, try motivating someone else to do the dishes or another chore that you're responsible for.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

   Write a response, evaluating your performance and suggesting ways to improve..

5. **Desirable Task Characteristics: (Check all that apply)**

   ____a. authenticity
   __✓__b. integration
   ____c. collaboration
   __✓__d. transfer
   ____e. tools and tech.
   ____f. multiple Intell.
   ____g. duration
   ____h. time
   ____i. sense of culture

6. **Estimated time required for task:**

7. **Prepared by:**

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Revise a product, performance, system, or idea in response to relevant information.

2. **Primary Enablers required (Include "home" of the task):** Science, Food Service.

Need knowledge of which materials can currently be recycled, cost factors for materials used, efficiency needs in food service.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

Because of increased concern over lack of space in landfills it would be desirable to develop alternate ways of serving lunch, eliminating much of the waste materials. In your groups of four, examine the typical ala carte lunch and its packaging. List several alternate ways of serving the food. Then, take one of these alternatives and examine its pros and cons.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

____a. authenticity
____b. integration
____c. collaboration
____d. transfer
____e. tools and tech.
____f. multiple Intell.
____g. duration
____h. time
____i. sense of culture

6. **Estimated time required for task:**

One class period (possibly more if expanded on)

7. **Prepared by:**

Lionel Kimmel and Jill Brandl, Menomonee Falls High School

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Revise a product, performance, system, or idea in response to relevant information.

2. **Primary Enablers required (Include "home" of the task):**

Math: Scale drawing, modeling, estimation and measurement, coordinate system.
Social Studies: Investigate historic development and impact of population shifts and growth, political ramifications of growth.
Science: Environmental impact of growth.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

You have been given a map of our community that is 20 years old. We are going to update this map to include:
present locations and streets.
possible areas for future development.

You need to research and report on the impact of population growth from the last 20 years and in the future. Included in your report you should address:
the environmental impact.
the business and industrial impact.
the educational and social impact.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

_____a. authenticity
_____b. integration
_____c. collaboration
_____d. transfer
_____e. tools and tech.
_____f. multiple Intell.
_____g. duration
_____h. time
_____i. sense of culture

6. **Estimated time required for task:**

Two weeks.

7. **Prepared by:**

Melissa Mason and Lauren Jensen

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

   Revise a product, performance, system, or idea in response to relevant information.

2. **Primary Enablers required (Include "home" of the task):**

   Elements of a story (characterization, setting, plot, theme/moral).
   Composition skills
   Oral communication
   Basic mechanics of writing

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

   You are a modern-day storyteller. You need to choose a traditional folk or fairy tale and revise it to reflect our existing world. Concentrate on the changing attitudes toward social issues such as sexism, technology, and violence.

   Rewrite the story.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

   ____a. authenticity
   ____b. integration
   ____c. collaboration
   ____d. transfer
   ____e. tools and tech.
   ____f. multiple Intell.
   ____g. duration
   ____h. time
   ____i. sense of culture

6. **Estimated time required for task:**

7. **Prepared by:**

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

   Revise a product, performance, system, or idea in response to relevant information.

2. **Primary Enablers required (Include "home" of the task):** Language Arts-written proposal.

   Communicate ideas to a variety of audience; Interpret information; Think creatively; Reason logically; Organize and sequence ideas.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

   You are the new student council president, and you have run on the platform of "change." Your first task is to revise the dress code. With the council, gather relevant information to support your position. Then, present the new code to student body, administration, parents, and school board for their adoption.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

   ____a. authenticity
   ____b. integration
   ____c. collaboration
   ____d. transfer
   ____e. tools and tech.
   ____f. multiple Intell.
   ____g. duration
   ____h. time
   ____i. sense of culture

6. **Estimated time required for task:**

7. **Prepared by:**

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Revise a product, performance, system, or idea in response to relevant information.

2. **Primary Enablers required (Include "home" of the task):** Science

Analyze; Brainstorm; Sketch; Calculate costs; Develop attitudes; Predict.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

Given the new knowledge being obtained by the Human Geome Project, how should this information be properly used?

Research genetic knowledge and update (science, library science). Display genetic gene molecule and loci (Art). Write a report on the societal impact of new information (Social Studies). Tie in costs of testing pregnant women (Math). Moral and values of messing with the human geome?

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

Was learning going on?

5. **Desirable Task Characteristics: (Check all that apply)**

____a. authenticity
[✓ b. integration]
[✓ c. collaboration]
____d. transfer
____e. tools and tech.
[✓ f. multiple Intell.]
[✓ g. duration]
____h. time
____i. sense of culture

6. **Estimated time required for task:**

Two weeks.

7. **Prepared by:**

Jack Drinkwine, Wabeno High School

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

   Revise a product, performance, system, or idea in response to relevant information.

2. **Primary Enablers required (Include "home" of the task):** Family & Consumer Education.

   Consumer Math: Computing skills; analyze; compare.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

   (As if teacher is speaking directly to the student)

   You are purchasing an $18,000 vehicle.

   Options: take a $1,000 rebate or 2.9% interest.
   or, get loan from bank at 7%

   Length of loan=4 years.

   Revise: change loan period to 3 years.

   Students are to make decisions as to which option is best.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

   ✓ **a. authenticity**
   ✓ **b. integration**
   ✓ **c. collaboration**
   ✓ **d. transfer**
   ✓ **e. tools and tech.**
   ☐ **f. multiple Intell.**
   ☐ **g. duration**
   ✓ **h. time**
   ☐ **i. sense of culture**

6. **Estimated time required for task:**

   One class period.

7. **Prepared by:**

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

   Revise a product, performance, system, or idea in response to relevant information.

2. **Primary Enablers required (Include "home" of the task):**

   View of political, cultural and economic systems.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

   You are the Vice President in charge of operations at a large trucking company in Northeast Wisconsin. With the passage of NAFTA, investigate the potential advantages and disadvantages your company will now face because of this legislation. (political, cultural, and economic)

   Once you have completed this task, develop a presentation in teams of 3 or 4 that you would present to the Board of Directors of this company so that they determine their strategy for implementing NAFTA.

   As a class, in teams, implement strategies for NAFTA in this company: Foreign language, math/transportation costs, cultural, anthropology, sociology, environmental regulations, costs involved, graphic arts

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

   Holistic
   Presentation format

5. **Desirable Task Characteristics: (Check all that apply)**

   [✓ a. authenticity]
   [✓ b. integration]
   [✓ c. collaboration]
   [✓ d. transfer]
   [✓ e. tools and tech.]
   ____f. multiple Intell.
   [✓ g. duration]
   ____h. time
   [✓ i. sense of culture]

6. **Estimated time required for task:**

   Four to five class periods, 5-10 if you include paragraph 3 in #3 above.

7. **Prepared by:**

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Revise a product, performance, system, or idea in response to relevant information.

2. **Primary Enablers required (Include "home" of the task):**

Language Arts: Read and understand; revise language and sentence structure; proofread and edit.
Social Studies: Recognize examples of gender and cultural equity and diversity.
Business Education: Typing.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

The student/faculty handbook needs to be revised. New state laws state that government documents must contain unbiased language. Our school board has asked our class to read, review, and revise the handbook, to comply with the new standards. Based on your investigation of teacher-provided resources, proofread and mark the section of the handbook provided to your group. After analyzing your section, report to the class the changes you made. After discussion, final changes will be made and a typewritten draft will be submitted to the student handbook committee.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

____a. authenticity
____b. integration
____c. collaboration
____d. transfer
____e. tools and tech.
____f. multiple Intell.
____g. duration
____h. time
____i. sense of culture

6. **Estimated time required for task:**

7. **Prepared by:**

Writing teachers/English teachers: WITC, WWTC, MSTC

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Revise a product, performance, system, or idea in response to relevant information.

2. **Primary Enablers required (Include "home" of the task):**

English-research skills, rhetorical skills, audience analysis.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

School board proposed to drop football as a savings in the budget. Student task is the following oral presentation:

1. Choose a pro/con position.
2. Outline your argument.
3. Research support material.
   a. Primary
   b. Secondary
4. Adjust speech to multiple audiences for maximum persuasion (student council, PTA, community service clubs, school board)

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

____a. authenticity
____b. integration
____c. collaboration
____d. transfer
____e. tools and tech.
____f. multiple Intell.
____g. duration
____h. time
____i. sense of culture

6. **Estimated time required for task:**

Two weeks.

7. **Prepared by:**

Betty Brieman, Dodgeland High School
Bob Brenner, Princeton High School
Bob Brien, MATC-Madison

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

   Revise a product, performance, system, or idea in response to relevant information.

2. **Primary Enablers required (Include "home" of the task):**

   Living Skills, Reading, Math, Survival, Technology, Special education

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

   The student will be able to determine the best deal for time of use in making a long distance phone call. For example, Sam calls his girlfriend in Michigan between 8:00 am and 4:00 pm at 25 cents a minute. He could call her between 4:00 pm and 11:00 pm for 20 cents a minute. He could call her between 11:00 pm and 8:00 am for 10 cents a minute. He has only $20 per month to spend.

   1. When can he call her most economically?
   2. How much time can he have to speak to her for each time period?
   3. What might be a problem with getting the best deal? (works night shift)
   4. Are there other ways to save money or talk to his girlfriend?

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

   Participation.

5. **Desirable Task Characteristics: (Check all that apply)**

   ____a. authenticity
   ____b. integration
   ____c. collaboration
   _✓_d. transfer
   ____e. tools and tech.
   _✓_f. multiple Intell.
   ____g. duration
   ____h. time
   ____i. sense of culture

6. **Estimated time required for task:**

   20-40 minutes.

7. **Prepared by:**

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

   Revise a product, performance, system, or idea in response to relevant information.

2. **Primary Enablers required (Include "home" of the task):**

   Art and design; Computer literacy; Geography (global awareness); Language Arts: Writing, reference skills; Math skills.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

   Design and develop a travel brochure for a specific place.* The brochure needs to include graphics, target audience, tip costs, accommodations, narrative description and other pertinent information.

   You will also produce a sixty-second video commercial with music highlighting brochure points of interest.

   * Modify in literature classes to correlate with specific settings or journey.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

   ✓ a. authenticity
   ✓ b. integration
   ✓ c. collaboration
   ✓ d. transfer
   ✓ e. tools and tech.
   ✓ f. multiple Intell.
   ✓ g. duration
   ✓ h. time
   ✓ i. sense of culture

6. **Estimated time required for task:**

7. **Prepared by:**

   Bob Chesney and Carla Mathews-Graham

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Revise a product, performance, system, or idea in response to relevant information.

Work effectively in groups to accomplish a goal.

2. **Primary Enablers required (Include "home" of the task):** Communication, Business Education, FBLA.

Survey, set goals, brainstorm ideas, teamwork and roles, propose/recommendations, format business documents, analysis, partnership with community, business, compile.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

A local business has hired your group as consultants to recommend changes in their employment screening procedures. Form a team of three to four people associated with your career cluster to:

1. Survey local businesses to collect documents and information of current procedures. (Use request letters, interviews, and written survey to collect data.)
2. Identify the needs and wants for hiring personnel in your career cluster.
3. Brainstorm ideas/procedures for employment screening.
4. Test and evaluate the procedure.
5. Present written and oral proposal to a business.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

Completion of sample forms.
Satisfaction of company.
Self-evaluation of team members.

5. **Desirable Task Characteristics: (Check all that apply)**

✓ a. authenticity
✓ b. integration
✓ c. collaboration
✓ d. transfer
____e. tools and tech.
____f. multiple Intell.
✓ g. duration
✓ h. time
____i. sense of culture

6. **Estimated time required for task:**

7. **Prepared by:**

Susan Sharkey, Ripon High School
Nancy Pum, Greenfield High School

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Revise a product, performance, system, or idea in response to relevant information.
Recognize, define, and solve a problem.
Develop and test a hypothesis.

2. **Primary Enablers required (Include "home" of the task):**

Science: Energy, friction, momentum, velocity, mass.
Math: angles, geometry, graphing, modeling.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

You will design a milk carton car that will travel the length of a lab table (2 meters long) and stop prior to falling off the table's edge.

The car will be made from a 1/2 pint milk carton with 4 straws for the axles and casings, wheels made from the plastic pushup disk of popsicles.

The car will initiate its momentum by adjusting the angle of an inclined plane on the lab table.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

_____a. authenticity
_____b. integration
_____c. collaboration
_____d. transfer
_____e. tools and tech.
_____f. multiple Intell.
_____g. duration
_____h. time
_____i. sense of culture

6. **Estimated time required for task:**

Three class periods (45 minutes each).

7. **Prepared by:**

Dana Lindh, Alfred Gomez and Mike Nelson

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

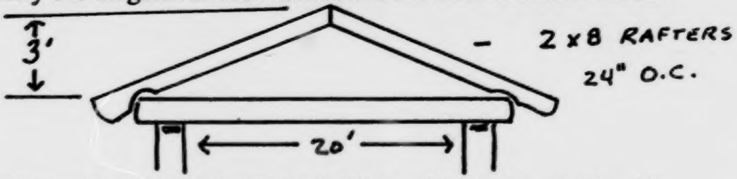
   Revise a product, performance, system, or idea in response to relevant information.
   Develop and test a hypothesis.

2. **Primary Enablers required (Include "home" of the task):** Technology Education.

   Analyze sketch, select best design, construct prototype, calculate cost, compare designs, predict results.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

   You are in the building construction company of Punjib & Sons. A customer has had a garage roof fail as a result of a heavy snow load. The garage is 20' x 24' and still has the walls standing and the insurance company has given an estimate of $3,000 for the cost of new materials. Your job is to design and build a new roof system that will stand up to winters in your area. You may use traditional wood materials and your building will take place using a scale model of balsa wood with a 1"=1' scale. Write an explanation of why your design will be stronger than the original as well as why the original failed. Calculate the cost of materials for your new roof.



4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

   ✓ a. **authenticity**
   ✓ b. **integration**
   ___ c. **collaboration**
   ✓ d. **transfer**
   ✓ e. **tools and tech.**
   ___ f. **multiple Intell.**
   ___ g. **duration**
   ___ h. **time**
   ___ i. **sense of culture**

6. **Estimated time required for task:**

   One to two weeks, depending on depth.

7. **Prepared by:**

   Mark Wallesverd, Jim Lawinger and Rich Hess

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Identify, develop, evaluate, and apply criteria to ideas, products, or performances of one's self or others.
Revise a product, performance, system, or idea in response to relevant information.

2. **Primary Enablers required (Include "home" of the task):** Language Arts.

Critical thinking; Interviewing skills.

3. TASK: **(Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

Revise a local news story that would seem to have facts that are contradictory to those of the actual story. This could include a local sporting event or news story that you have direct knowledge of or know someone else who was witness to this event.

Your task is to interview persons who witnessed the event first hand that may have been overlooked by the local reporter. Based on the facts gathered from your interviews, create a revision of the story based on your findings.

This revision should be presented to the class. At that time you should ask you classmates for any improvements or changes that should be made to make the story more accurate or understandable.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

____a. authenticity
____b. integration
____c. collaboration
____d. transfer
____e. tools and tech.
____f. multiple Intell.
____g. duration
____h. time
____i. sense of culture

6. **Estimated time required for task:**

Two to three class periods.

7. **Prepared by:**

Mark Kocyan

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

   Work effectively in groups to accomplish a goal.

2. **Primary Enablers required (Include "home" of the task): Science**

   Writing Skills
   Analytical Thinking
   Team Work

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

   The class will be divided into equal groups. Each group will grow bacteria under different conditions. The bacteria will be analyzed according to preestablished criteria. Each group will interpret the results and report it to the class.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

   Each student will be evaluated on the results of their group report and on an individual basis according to participation within the group.

5. **Desirable Task Characteristics: (Check all that apply)**

   ✓ **a. authenticity**
   ✓ **b. integration**
   ✓ **c. collaboration**
   ____ **d. transfer**
   ✓ **e. tools and tech.**
   ✓ **f. multiple Intell.**
   ✓ **g. duration**
   ✓ **h. time**
   ____ **i. sense of culture**

6. **Estimated time required for task:**

   Three days.

7. **Prepared by:**

   Laona High School

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Conceive of places, times, and conditions different from one's own.

2. **Primary Enablers required (Include "home" of the task):**

Math: Knowledge of metrics, foreign currency.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

Explore the systems of measurement and currency in the country of our foreign exchange student. In groups, find a recipe and equate the ingredients and measurements. In pairs, research the currency and rate of exchange. Prepare a short report on money. Individually, write a scenario on driving in that country, including, gasoline, speed limits, spark plugs, etc.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

Taste test
Written reports

5. **Desirable Task Characteristics: (Check all that apply)**

✓ a. authenticity
✓ b. integration
____ c. collaboration
✓ d. transfer
✓ e. tools and tech.
____ f. multiple Intell.
____ g. duration
✓ h. time
✓ i. sense of culture

6. **Estimated time required for task:**

One week total.

7. **Prepared by:**

Barb Bredel.

INTEGRATED AND APPLIED CURRICULA

AUTHENTIC TASKS

DEVELOPED BY

INTERDISCIPLINARY TEAMS

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Identify, develop, evaluate, and apply criteria to ideas, products, or performances of one's self or others. Make informed decisions by examining alternatives and anticipating consequences of actions. Create a quality product, process, or performance that will meet a need. Recognize, define, and solve a problem.

2. **Primary Enablers required (Include "home" of the task):**

Math: calculate square footage; loan interest; price comparisons; scale drawings.
Communication Skills: interview; research; oral; written report; presentation.
Technical Skills.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

You need to think about opening your own repair facility. You need to investigate costs of facility and necessary equipment for operation by considering common charges for services rendered and would the business be profitable through operation.

Based on your investigation through interviews and written resources, develop a written feasibility report and prepare an oral presentation of your plan.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

Primary Traits: math enabler; written report using a generic rubric.
Analytical Scale/Profile: oral presentation and/or written report.

5. **Desirable Task Characteristics: (Check all that apply)**

____a. authenticity
____b. integration
____c. collaboration
____d. transfer
____e. tools and tech.
____f. multiple Intell.
____g. duration
____h. time
____i. sense of culture

6. **Estimated time required for task:**

Six weeks (or 18 hours).

7. **Prepared by:**

Dan, Phil, Lois, Shirley and Paul, Southwest Wisconsin Technical College

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

   Identify, develop, evaluate, and apply criteria to ideas, products, or performances of one's self or others.
   Make informed decisions by examining alternatives and anticipating consequences of actions.

2. **Primary Enablers required (Include "home" of the task):** Vocational Education and Communications.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

   You are an owner/operator of a small automotive repair shop. You have just hired two new employees. After thirty days of employment you need to determine which employee (or both) is contributing and making a profit for your business. To do this, you need to develop a job performance evaluation form which must include a criteria list and the criteria must have a description for employees to review. Criteria shoul at least include employee output and business expectations.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

   Holistic: should we retain employee?
   Primary Trait: criteria list to evaluate performance.

5. **Desirable Task Characteristics: (Check all that apply)**

   _✓_ a. authenticity
   ____ b. integration
   ____ c. collaboration
   ____ d. transfer
   ____ e. tools and tech.
   ____ f. multiple Intell.
   ____ g. duration
   ____ h. time
   ____ i. sense of culture

6. **Estimated time required for task:**

7. **Prepared by:**

   Frank Palm, Brian Schultz, Marc Miller, Anna peterson and Jay Zimmerman,
   Elmbrook High School

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Identify, develop, evaluate, and apply criteria to ideas, products, or performances of one's self or others.

2. **Primary Enablers required (Include "home" of the task):** Family & Consumer Education.

Develop a survey to test market the personal household produce that can be made in a chemistry lab. That is safe to make and use. Utilize the survey to evaluate the produce.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

Develop criteria to evaluate the product (as per enablers).

Develop a survey instrument to evaluate a product developed in a chemistry lab.

Test survey/criteria to determine if the survey gathers data and revise instrument if necessary.

Distribute the survey to gather data about the product developed in the chemistry lab.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

Analytical scale: participation; functionality of product; and, criteria to evaluate product.

5. **Desirable Task Characteristics: (Check all that apply)**

a. authenticity
[✓ b. integration]
[✓ c. collaboration]
d. transfer
e. tools and tech.
f. multiple Intell.
g. duration
h. time
i. sense of culture

6. **Estimated time required for task:**

Three to four days.

7. **Prepared by:**

Neenah Team/FVTC Consortium

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

   Revise a product, performance, system, or idea in response to relevant information.

2. **Primary Enablers required (Include "home" of the task):**

   Math: prediction and estimation, averages, formulas.
   Business Education: computer applications, spread sheets.
   Language Arts: brief written evaluation of the project.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

   Given previous concession data concerning product, price, and profit, develop a spread sheet that shows items and average profit based on total concessions to date. Calculate profit increase if price per item were raised five cents and ten cents. Do a brief written evaluation which should include your profit observations based on spread sheet statistics. Show how this project can be used to predict outcomes of change.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

   Analytical Scale: math formulas, spread sheet development and writing content and mechanics.

5. **Desirable Task Characteristics: (Check all that apply)**

   [✓ **a. authenticity**]
   [✓ **b. integration**]
   [✓ **c. collaboration**]
   [✓ **d. transfer**]
   [✓ **e. tools and tech.**]
   [✓ **f. multiple Intell.**]
   ____**g. duration**
   [✓ **h. time**]
   ____**i. sense of culture**

6. **Estimated time required for task:**

   Two class periods.

7. **Prepared by:**

   Wabeno High School

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

   Revise a product, performance, system, or idea in response to relevant information.

2. **Primary Enablers required (Include "home" of the task):**

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

   a). Divide class into groups of three.
   b). Assign roles as an auto body shop owner/technician, a customer, and an insurance company/adjuster.
   c). Visit (owner/technician) an actual body shop and investigate an actual wreck and submit a detailed written bid on the standard estimate form to the customer.
   d). Customer submits bid to insurance company/adjuster.
   e). Insurance company/adjuster writes letter to customer indicating non acceptance of bid (investigation to follow).
   f). Insurance company/adjuster duplicates step (c).
   g). Insurance company/adjuster submits adjusted written bid to shop owner and customer.
   h). Customer contacts in writing insurance company/adjuster rejecting adjusted bid or agreeing to adjusted bid.
   i). If rejected, all three team members meet and defend individual positions to resolve problem.
   j). Reach consensus between all three parties involved.
   k). If accepted, a letter written by customer indicating acceptance.
   l). If rejected, go back to (i).

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

____a. authenticity	**____d. transfer**	**____g. duration**
____b. integration	**____e. tools and tech.**	**____h. time**
____c. collaboration	**____f. multiple Intell.**	**____i. sense of culture**

6. **Estimated time required for task:**

7. **Prepared by:**

   Southwest Wisconsin Technical College (Curricular Change Agents)

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Revise a product, performance, system, or idea in response to relevant information.

2. **Primary Enablers required (Include "home" of the task):** Electronics.

Interpret mathematical formulas; verbalize mathematical and technical relationships; identify variables; describe order and method of calculations; use graphing methods; define technical terms; and, use expository writing strategies.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

You are a design technician at EXXON in corporate research. You have run an experiment and have written a technical report to document your research. You will be presenting your report to the corporate board at large, most of whom are not technically literate.

Take your lab report and rewrite it so that the general population can understand it. Explain technical terms in a non-technical manner. Describe the mathematical calculations so that a non-technical audience can understand them. Present all data and information in a visual manner. Prepare a business presentation on a word processor and use graphics software.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

Analytical Scale: how well student defines terms; organization; professional appearance; completeness of all processes and an explanation of each process; and, objectivity. Have equal weight for each criteria.

5. **Desirable Task Characteristics: (Check all that apply)**

✓ a. authenticity
✓ b. integration
____ c. collaboration
✓ d. transfer
✓ e. tools and tech.
____ f. multiple Intell.
✓ g. duration
____ h. time
____ i. sense of culture

6. **Estimated time required for task:**

One hour in math and in English; out of class time for the students to write report.

7. **Prepared by:**

Jennifer Madej, Kathy Dixon and Pat Sutterfield, MATC-Milwaukee team

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Revise a product, performance, system, or idea in response to relevant information.

2. **Primary Enablers required (Include "home" of the task):** Math.

Unit cost; proportions; percent; weights (for applied/low level); surface area (algebra, geometry); volume (geometry/pre calc).
Communications.
Art.
Consumer issues, foods.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

You have just opened a pizzeria. You would like to market your pizza as having "20% more" than the competitors. Create your slogan to match your pizza. Include a summary of your rationale for creating your pizza. Include what "20% more" means. Also, create an advertisement for your pizza. This could be an ad, a video, etc.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

____a. authenticity
_✓_b. integration
_✓_c. collaboration
____d. transfer
____e. tools and tech.
_✓_f. multiple Intell.
____g. duration
____h. time
____i. sense of culture

6. **Estimated time required for task:**

7. **Prepared by:**

Annette Homen, Sue Maenner, Peter Raphael and Julie Milazzo

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Revise a product, performance, system, or idea in response to relevant information.

2. **Primary Enablers required (Include "home" of the task):**

Science: understand transmission of disease.
Business : laws.
Math: economic cost of not abiding by legislation.
Language Arts: write the report; present suggested changes.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

As the director of a day care center, you are asked to review the existing policy and procedures manual and determine if it is in compliance with current precautions regarding blood borne pathogens..

Rewrite any policies regarding hiring of personnel, accepting clients, (screening employees and clients), and procedures for first aid, food preparation and/or diaper changing if necessary.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

✓ **a. authenticity**
✓ **b. integration**
____ **c. collaboration**
____ **d. transfer**
____ **e. tools and tech.**
____ **f. multiple Intell.**
____ **g. duration**
____ **h. time**
____ **i. sense of culture**

6. **Estimated time required for task:**

Four to six weeks.

7. **Prepared by:**

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

   Make informed decisions by examining alternatives and anticipating consequences of actions.

2. **Primary Enablers required (Include "home" of the task):**

   Math: Formula, budget, spreadsheet
   Business: Database, spreadsheet
   Communications: Cooperative groups, application, presentation
   Art: Poster? (Visual Aid)
   F/CE: Computer integrated

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

   Given a life scenario and partner, the students will research the purchase of a vehicle, such as: car, sailboat, snowmobile, motorcycle, etc. This process will include the following:
   - Collaborating (decision-making)
   - Keeping a database
   - Researching loans
   - Discussing budgetary constraints, safety considerations, future budgetary implications, such as operating costs, repair, insurance, etc.
   - Selecting loans
   - Filling out loan application
   - Developing an amortization table using a spreadsheet

   Finally, students will explain their choice, using (creating) a poster and oral presentation.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

   Profile

5. **Desirable Task Characteristics: (Check all that apply)**

   ✓ **a. authenticity**
   ✓ **b. integration**
   ✓ **c. collaboration**
   ✓ **d. transfer**
   ✓ **e. tools and tech.**
   ✓ **f. multiple Intell.**
   ✓ **g. duration**
   ✓ **h. time**
   ✓ **i. sense of culture**

6. **Estimated time required for task:**

   One class period a week for nine weeks. Most work will be done outside of class.

7. **Prepared by:**

   Waupun School District

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Make informed decisions by examining alternatives and anticipating consequences of actions.

2. **Primary Enablers required (Include "home" of the task):**

Gather evidence; identify options; weigh pros and cons; choose a course of action.

3. TASK: **(Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

Your friend tells you a co-worker is making negative comments about your performance at work. Your job is already in danger because the company is considering lay-offs. You're concerned those comments will damage your reputation.

Determine and investigate the validity of those comments and identify at least four possible options. From those four options, list pros and cons for each and finally choose a course of action based upon your findings.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

Analytical Scale 1-5 (5 Being Highest)
Weighing pros and cons (5)
Identifying options (3)
Gathering evidence/choosing a course of action (2 Each)

5. **Desirable Task Characteristics: (Check all that apply)**

__✓__a. authenticity
__✓__b. integration
_____c. collaboration
__✓__d. transfer
_____e. tools and tech.
__✓__f. multiple Intell.
__✓__g. duration
_____h. time
_____i. sense of culture

6. **Estimated time required for task:**

One to two class periods

7. **Prepared by:**

Janeen Buirsdorf, Will Elmhorst, Marshfield High School

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Make informed decisions by examining alternatives and anticipating consequences of actions.

2. **Primary Enablers required (Include "home" of the task):** Language Arts.

Math: read graphs and charts; analyze; ratios; vectors.
Language Arts: persuasive speech techniques.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

You are a pilot, who given certain weather conditions and distance and clearance restrictions, needs to decide whether it is safe to take-off. Your passenger needs to be at an important meeting on time and is willing to pay extra if you will take him/her. Using the given charts, graphs, and conditions, analyze the situation and decide whether you will/will not fly. Charts and graphs available from avionics personnel. Present your decision orally using persuasive technique. If you were the passenger and the pilot decided not to fly, what would your options be?

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

Analytical Scale: persuasive speech criteria.

5. **Desirable Task Characteristics: (Check all that apply)**

✓ a. authenticity
✓ b. integration
____ c. collaboration
✓ d. transfer
✓ e. tools and tech.
____ f. multiple Intell.
____ g. duration
✓ h. time
____ i. sense of culture

6. **Estimated time required for task:**

Two class periods.

7. **Prepared by:**

Ann and Hazel, Blackhawk Technical College

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Make informed decisions by examining alternatives and anticipating consequences of actions.

2. **Primary Enablers required (Include "home" of the task):**

Math & Science: calculating costs; gather; analysis; and organize data.
Language Arts: brainstorming; library research; writing; and, self evaluation.
Social Studies: recognizing people's basic needs.
All: critical thinking skills and problem solving.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

You are the sole source of income, married, and have three children, one of which is entering high school. You are currently working 40 hours per week and are paid $9.00 per hour. You can opt to take health insurance or not. Your portion of the insurance would be $100 per month. You also have a savings account of $1,000. You must design a budget that will cover all necessities for you and your family for a month. Expenses should reflect prices in the city of Milwaukee today. Be wise with your money. Unforeseen expenses might occur.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

An analytical scale to evaluate the student's budget.
After the budget is completed, students will prepare a written self-evaluation that will be holistically assessed.

5. **Desirable Task Characteristics: (Check all that apply)**

✓ a. authenticity
✓ b. integration
____c. collaboration
____d. transfer
____e. tools and tech.
____f. multiple Intell.
✓ g. duration
✓ h. time
____i. sense of culture

6. **Estimated time required for task:**

On-going project for one semester.

7. **Prepared by:**

Diane O'Krongly, Erv Scheibengraber and Pat Fleming, Custer High School

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

   Make informed decisions by examining alternatives and anticipating consequences of actions.

2. **Primary Enablers required (Include "home" of the task):** Technology Education.

   Spatial visualization; read specifications; use price lists; stay within a budget; use measurements; scale reading/drawing.
   Math: calculation, formulas.
   Business: spread sheet data.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

   You are a homeowner who wants to upgrade your kitchen. Your budget cannot allow a total cost of more than $5,000. Your task is to redesign the kitchen.

   First, determine placement of appliances and determine work triangle. Then, determine specifications and options of cabinets. Based on your investigations, determine the deciding criteria for cabinet possibilities. Explore various companies to compare/contrast the cupboards that best fit your budget and criteria.

   Using basic blueprint forms, finalize the layout, drawing a scale floor plan and specifications of cabinets ordered.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

   Analytical Scale: feasibility of solution; accuracy of calculations; and, neatness of final blue print.

5. **Desirable Task Characteristics: (Check all that apply)**

   ✓ **a. authenticity**
   ✓ **b. integration**
   ✓ **c. collaboration**
   ___ **d. transfer**
   ✓ **e. tools and tech.**
   ✓ **f. multiple Intell.**
   ✓ **g. duration**
   ___ **h. time**
   ___ **i. sense of culture**

6. **Estimated time required for task:**

   Four to five days.

7. **Prepared by:**

   Laconia High School

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

   Make informed decisions by examining alternatives and anticipating consequences of actions.

2. **Primary Enablers required (Include "home" of the task):** Language Arts.

   Math: cost implications.
   Writing: press releases and statements.
   Cultural awareness.
   Government Class: legal issues.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

   You are a member of your local school board. Recently, there has been evidence of gang-related activity in your community and increasing fear of violence in the schools and community. The School Board is under a great deal of pressure to pass a dress code, at a minimum, and/or develop a policy to prevent violence and gangs in the schools.

   You are chairing a subcommittee that will research the problem and make a recommendation to the Board. Prepare a report examining various alternative policies. Your report should include your reasons for choosing or rejecting their alternatives.

   Your committee should also prepare for and hold a press conference introducing your findings and recommendations to the community.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

   ✓ **a. authenticity**
   ____ **b. integration**
   ____ **c. collaboration**
   ____ **d. transfer**
   ____ **e. tools and tech.**
   ____ **f. multiple Intell.**
   ____ **g. duration**
   ____ **h. time**
   ✓ **i. sense of culture**

6. **Estimated time required for task:**

7. **Prepared by:**

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

   Make informed decisions by examining alternatives and anticipating consequences of actions.

2. **Primary Enablers required (Include "home" of the task):** Chemistry & Parenting.

   Recognize evidence of chemical reaction having occurred; Observation skills; Problem-solving; Basic knowledge of chemistry; Safety awareness; Lab techniques.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

   You are a parent. One of your responsibilities as a parent is to protect your children from harm. One way to do this is to keep harmful chemicals out of reach of your children. Part of this also involves storing and using common household products safely. Given the following common household products/chemicals, determine which combination of two chemicals are potentially harmful.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

   Analytical Scale: you must have done at least 30 combinations.
   Accurate observations: gas formation; color; odor; color change, etc.
   Summary Table.

5. **Desirable Task Characteristics: (Check all that apply)**

   ✓ a. authenticity
   ✓ b. integration
   ✓ c. collaboration
   ____ d. transfer
   ✓ e. tools and tech.
   ____ f. multiple Intell.
   ____ g. duration
   ____ h. time
   ____ i. sense of culture

6. **Estimated time required for task:**

   One period.

7. **Prepared by:**

   Mary Oehler, Nancy Becker and Kim Barbeau, Prairie du Chien High School

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Make informed decisions by examining alternatives and anticipating consequences of actions.

2. **Primary Enablers required (Include "home" of the task):**

Understanding of basic math.
Career awareness.
Understanding of relevance of course selection.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

Develop a budget dependent upon the income of a randomly obtained occupation.

Draw out of a hat your income for the year. Now, determine the car you want to drive, where you are going to live, etc. Investigate rent costs, car loans, food costs, entertainment, etc. Do you make enough money to live a lifestyle that is comfortable?

Cross-curriculum: different occupations/education needed.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

____a. authenticity
____b. integration
____c. collaboration
____d. transfer
____e. tools and tech.
____f. multiple Intell.
____g. duration
____h. time
____i. sense of culture

6. **Estimated time required for task:**

Two to three days.

7. **Prepared by:**

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

   Make informed decisions by examining alternatives and anticipating consequences of action.

2. **Primary Enablers required (Include "home" of the task):**

   Science: genetic engineering.
   Math: permutations, combinations.
   English: comprehension, research skills.
   Social Studies: ethics, politics.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

   You are a consumer. You need to purchase a gallon of milk. The supermarket has two kinds of milk available. One kind was obtained from a cow injected with BGH. The other was produced without BGH. Both are from small company and cost the same. Which one would you choose and why? Defend your answer with a written essay.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

   _____a. authenticity
   _____b. integration
   _____c. collaboration
   _____d. transfer
   _____e. tools and tech.
   _____f. multiple Intell.
   _____g. duration
   _____h. time
   _____i. sense of culture

6. **Estimated time required for task:**

7. **Prepared by:**

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Make informed decisions by examining alternatives and anticipating consequences of actions.
Recognize when a need for specific information exists and demonstrate the ability to locate, evaluate, and focus that information.

2. **Primary Enablers required (Include "home" of the task):**

Employability class, job skills class, communications class.

Research; math; drawing conclusions; listening; report writing; speaking.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

You are a graduating student who has been offered two different positions. One job pays $6.50 per hour and includes a health care package. The second position, which does not include health care, pays $8.50 per hour.

Tasks and working conditions being equal, which offer is most beneficial for your needs. Prepare and present an oral report of your decision and the reason for it.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

Profile (analytical scale).

5. **Desirable Task Characteristics: (Check all that apply)**

✓ a. authenticity
✓ b. integration
____ c. collaboration
✓ d. transfer
____ e. tools and tech.
✓ f. multiple Intell.
____ g. duration
✓ h. time
____ i. sense of culture

6. **Estimated time required for task:**

Five hours

7. **Prepared by:**

Bruce Perreault, Tom Cheesebro and Sally Neeb

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

   Make informed decisions by examining alternatives and anticipating consequences of actions. Achieve desired results by interpreting and executing instructions, plans, models, and diagrams. Recognize and devise systems and describe their interdependence.

2. **Primary Enablers required (Include "home" of the task):**

   Geography: aesthetic awareness.
   Grammar: oral communications

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

   You are planning a plane trip to Orlando, Florida or a foreign country. You must call three airlines for prices. Design your itinerary with one partner. Examine rates, flight times, etc. Include mention of hotels, food and general history of your selected city. Jointly, write a one-page paper on historical facts about your city.

   You, as a class, will develop a manual on a 25' x 3' roll of paper which details your city.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

   _✓_ a. authenticity
   _✓_ b. integration
   _✓_ c. collaboration
   _✓_ d. transfer
   ____ e. tools and tech.
   ____ f. multiple Intell.
   _✓_ g. duration
   _✓_ h. time
   _✓_ i. sense of culture

6. **Estimated time required for task:**

   One week.

7. **Prepared by:**

   Paul Pignet and Ron Stechcon, Pulaski High School

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

    Achieve desired results by interpreting and executing instructions, plans, models, and diagrams.

2. **Primary Enablers required (Include "home" of the task):** Technology Education.

    Technology: Use computer hardware and software.
    Language Arts: Technical reading, interpersonal communications.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

    You have been given data on one of the following topics: Student lunch participation, students who drive vs. riding the bus, student extra-curricular involvement. Using this data create a graph or pie chart with the provided computer graphics program and print a copy.

    You will be evaluated on your ability to follow directions, which may come from one or more of the following sources:

    a. Reading the computer manual
    b. Asking a friend
    c. Participating with a group to understand the procedure. Each student much turn in a pie chart or graph.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

    Primary Trait: Student produced a printed pie chart or graph that clearly and accurately presents the given data.

5. **Desirable Task Characteristics: (Check all that apply)**

    ✓ **a. authenticity**
    ✓ **b. integration**
    ✓ **c. collaboration**
    ✓ **d. transfer**
    ✓ **e. tools and tech.**
    ____ **f. multiple Intell.**
    ____ **g. duration**
    ____ **h. time**
    ____ **i. sense of culture**

6. **Estimated time required for task:**

7. **Prepared by:**

    Joanne Casey, Pamela Hillesheim-Setz: CESA #5
    Jim Giebel: New Lisbon High School
    Peggy Saylor: Necedah High School

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Achieve desired results by interpreting and executing instructions, plans, models, and diagrams.
Transfer learning from one context to another.

2. **Primary Enablers required (Include "home" of the task):** Math, Graphics, English and Art.

Reading/interpreting directions; metric conversions; proportions; problem-solving; critical thinking; and design concepts.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

You have been selected to represent an European restaurant chain. Your job is to contact a graphics company with an idea for a logo that can be used in the following three places: a window, a letterhead, and placemats,

a). have an example of logo (your idea, graphic student's design).
b). show conversions of metrics to standard measures or vice versa for all measurements (from Graphics),
c). design a cost analysis for production of the three items,
d). investigate alternative measurement tools and list pros and cons of each in developing graphics, and
e). write your procedure for the entire process as a summary to present to class.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

Primary Trait: write; calculate; follow directions.
Holistic: did student complete task.
Rating Profile:

5. **Desirable Task Characteristics: (Check all that apply)**

✓ **a. authenticity**
✓ **b. integration**
✓ **c. collaboration**
✓ **d. transfer**
✓ **e. tools and tech.**
✓ **f. multiple Intell.**
✓ **g. duration**
✓ **h. time**
✓ **i. sense of culture**

6. **Estimated time required for task:**

Two weeks.

7. **Prepared by:**

Mitzi Horning, Nancy Mayo, Terry Biel, Kerry Johnson and Tom Hilts, Waukesha

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

   Recognize and devise systems and describe their interdependence.
   Recognize, define, and solve a problem.
   Work effectively in groups to accomplish a goal.

2. **Primary Enablers required (Include "home" of the task):**

   Communications: writing skills (develop survey, presentation of results), oral skills (persuasive use of data).
   Math: gather, organize, interpret data.
   Computer Skills: spreadsheet graphics.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

   The school board is actively pursuing the closing of our campus. You will be divided into groups of five to develop a survey tool to be used to secure, analyze, and interpret data. From this data you will prepare a persuasive presentation, both written and oral, ultimately for the school board in support of your point of view. The written presentation can be in the form of pamphlets, reports, editorials, graphs, etc.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

   Participation (as determined by peers) - analytical scale.
   Group work (organize, interpret data, develop results) - holistic.
   Oral presentation - profile.

5. **Desirable Task Characteristics: (Check all that apply)**

   ✓ a. authenticity
   ✓ b. integration
   ✓ c. collaboration
   ✓ d. transfer
   ✓ e. tools and tech.
   ___ f. multiple Intell.
   ___ g. duration
   ___ h. time
   ___ i. sense of culture

6. **Estimated time required for task:**

   Two to three weeks.

7. **Prepared by:**

   Betty Brieman, Joan Lemke, John Schecher and Mark Wallesverd, Dodgeland High School

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Recognize, define, and solve a problem.
Work effectively in groups to accomplish a goal.
Defend a position by integrating information from multiple sources.

2. **Primary Enablers required (Include "home" of the task):**

Math: charts, statistics.
Social Studies: laws.
Language Arts: writing/communications skills.
Vocational Education: problem solving, predicting, keyboarding/using computers, cooperative learning, persuasion.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

Form a group of five students. Study the current daily school schedule and identify the pros and cons of this system. Create a new daily schedule that is educationally stimulating and better meets the needs of students. Look up state and local laws regarding the school day and adjust your schedule accordingly. Anticipate any problems your daily schedule would create and brainstorm viable solutions to these problems. Write a proposal addressing why the school should adopt your schedule. Prepare a formal report to present to the school board. Include relevant charts, graphs, data, etc.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

Oral presentation: knowledge, speaking skills.
Holistic: Tasks above, as a whole.

5. **Desirable Task Characteristics: (Check all that apply)**

✓ **a. authenticity**
✓ **b. integration**
✓ **c. collaboration**
✓ **d. transfer**
✓ **e. tools and tech.**
f. multiple Intell.
✓ **g. duration**
✓ **h. time**
✓ **i. sense of culture**

6. **Estimated time required for task:**

Five to seven class periods plus out of class time.

7. **Prepared by:**

Edgerton High School

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Create a quality product, process, or performance that will meet a need.

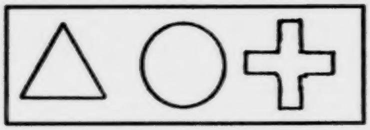
2. **Primary Enablers required (Include "home" of the task):** Technology Education.

Technology Education: communications/design; brainstorming.
Art: modeling.
Math: volume.
Physics: volume by displacement/mass.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

You are given the following job by your boss:

Design a part that will fit through as well as completely fill each of the shapes in the wooden template (as seen below). This part is used for the new space station that has been put in earth's orbit years ago. Weight is a problem that must be observed since thousands must be sent to the station at a single time. These parts are used to maintain the gravitational pull as it is on earth.



4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

Proper fit:
1=perfect 2=fits well 3=quite loose

5. **Desirable Task Characteristics: (Check all that apply)**

_✓_a. authenticity
_✓_b. integration
_✓_c. collaboration
_✓_d. transfer
_✓_e. tools and tech.
_✓_f. multiple Intell.
_✓_g. duration
_✓_h. time
____i. sense of culture

6. **Estimated time required for task:**

Two to three hours.

7. **Prepared by:**

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Create a quality product, process, or performance that will meet a need.

2. **Primary Enablers required (Include "home" of the task):**

Social Studies: gather appropriate information on positive qualities of the American Colonies.
English: write a script using persuasive techniques.
Technology Education: produce the final product using various multi-media technologies.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

Imagine that you are a member of the "Committee to Settle America" (C.S.A.). Produce a video presentation which promote the colonies and help persuade others to settle there. Decide what areas of colonial America that you want to promote. Divide your self into groups of equal number based upon the areas. Through research, identify source material to be used in the video. (CD ROM, relevant books, appropriate music, etc.) Using persuasive techniques, write a script that keeps in mind the purpose of the assignment and the appropriate audience. Produce and present your video.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

Analytical Scale that evaluates: production quality (Tech. Ed.), script quality/persuasive techniques (English) and research accuracy, including sources and quality (History).

5. **Desirable Task Characteristics: (Check all that apply)**

[✓ a. authenticity]
[✓ b. integration]
[✓ c. collaboration]
[✓ d. transfer]
[✓ e. tools and tech.]
f. multiple Intell.
g. duration
h. time
[✓ i. sense of culture]

6. **Estimated time required for task:**

Three to five days.

7. **Prepared by:**

Wausau East High School

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Create a quality product, process, or performance that will meet a need.

2. **Primary Enablers required (Include "home" of the task):**

Technical analysis; measurement and calculations; written and technical communications.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

You are going to install a volleyball court. You must calculate the necessary materials, cost of materials, service provided (how it affects size and materials) which meets the following specifications:

1. 2 volleyball courts
2. fencing
3. type of materials
4. lighting
5. spectator
6. landscaping

Present two alternatives for building diagrams and appropriate budget.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

✓ a. authenticity
✓ b. integration
✓ c. collaboration
___ d. transfer
✓ e. tools and tech.
✓ f. multiple Intell.
___ g. duration
___ h. time
___ i. sense of culture

6. **Estimated time required for task:**

One week.

7. **Prepared by:**

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Identify compelling personal interests and goals and pursue them.

2. **Primary Enablers required (Include "home" of the task):**

Careers: researching; interviewing; note taking skills; writing skills; computer skills; self-evaluation.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

You are to investigate a career that interests you. Your research should include job requirements, possibilities for advancement, salary, how your interests and abilities tie in, job market, education, related occupations, geographic location, etc. Working with your instructor, you are to choose and schedule a job shadowing experience of at least four hours. You are then to generate a report. This report can be done in written form, oral form, use a video presentation, include photography.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

Profile - Report.

5. **Desirable Task Characteristics: (Check all that apply)**

✓ a. authenticity
✓ b. integration
____ c. collaboration
____ d. transfer
____ e. tools and tech.
____ f. multiple Intell.
____ g. duration
✓ h. time
____ i. sense of culture

6. **Estimated time required for task:**

Three to four days.

7. **Prepared by:**

Betty Brieman, Joan Lemke, John Schecher and Mark Wallesverd, Dodgeland High School

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Create a quality product, process, or performance that will meet a need.

2. **Primary Enablers required (Include "home" of the task):**

Life Science: nutrition.
Business: budget.
Aesthetics.
Technology.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

Generate the school lunch menu for one month. Stay within the budget, consider state standards on nutrition, satisfy the student body.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

✓ a. authenticity
✓ b. integration
✓ c. collaboration
✓ d. transfer
____ e. tools and tech.
____ f. multiple Intell.
____ g. duration
____ h. time
✓ i. sense of culture

6. **Estimated time required for task:**

7. **Prepared by:**

Tom McCormick, Bob Lange, Jean Abreu, Kay Grace, Marge Fietz, Lynn Schneider, Ken Stahl and Pat Kelley

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Create a quality product, process, or performance that will meet a need.

Work effectively in groups to accomplish a goal.

2. **Primary Enablers required (Include "home" of the task):**

Music: composition and lyric writing.
English: poetry, theme.
Technology and Physics: volume, sound equipment, speaker system.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

You are the principal of the school. You are responsible for orienting students, staff, and community to new facilities.

1. You are to write a new school song for the new school.
2. You are also to explore possibility of providing music during passing times, lunch, etc. Is it possible? What kinds of music should be played? Survey students and faculty.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

Holistic

5. **Desirable Task Characteristics: (Check all that apply)**

_✓_a. authenticity
_✓_b. integration
_✓_c. collaboration
____d. transfer
_✓_e. tools and tech.
_✓_f. multiple Intell.
____g. duration
____h. time
_✓_i. sense of culture

6. **Estimated time required for task:**

7. **Prepared by:**

Caroline Wieman, Mike Kolff, Mike Reisenauer and Anne Greuel

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

   Create a quality product, process, or performance that will meet a need.

2. **Primary Enablers required (Include "home" of the task):** Social Studies (psych.)

   Math: Statistics/computers
   Art: Graphics
   Science: Inks, environment, and recycling.
   Technology Education: Production.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

   Design an advertising campaign to increase attendance at the "Home" Sporting events. Complete a statistical analysis of the results of the campaign.

   Final Product: Summary report on results of this campaign and statistical analysis.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

   - ✓ **a. authenticity**
   - ✓ **b. integration**
   - ✓ **c. collaboration**
   - ____ **d. transfer**
   - ✓ **e. tools and tech.**
   - ✓ **f. multiple Intell.**
   - ____ **g. duration**
   - ____ **h. time**
   - ____ **i. sense of culture**

6. **Estimated time required for task:**

7. **Prepared by:**

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Transfer learning from one context to another.

2. **Primary Enablers required (Include "home" of the task):**

Compare and contrast; computing; analyze; communication; and, negotiating.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

Determine the pros and cons of various leasing methods and purchase plans for an automobile.

Day 1: Presentation of leasing vs. purchasing.
(guest speaker - dealership, finance manager, sales manager)

Day 2: Loan % calculation — calculator use
% ----decimals — dec., +, -, x, ÷
decimals----%

Day 3: Presented with variety of leasing and purchase scenarios/plans determine the pros and cons of each plan; show ability to read and understand contract; analyze.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

Primary Trait: Math: operation with % (make clear trait is being tested).
Consumer Ed: decision making, comparison of information (make clear the skills to be tested).

5. **Desirable Task Characteristics: (Check all that apply)**

✓ a. authenticity
✓ b. integration
✓ c. collaboration
✓ d. transfer
____ e. tools and tech.
✓ f. multiple Intell.
____ g. duration
____ h. time
✓ i. sense of culture

6. **Estimated time required for task:**

Three days.

7. **Prepared by:**

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

   Transfer learning from one context to another.

2. **Primary Enablers required (Include "home" of the task):**

   Communications skills: read, write, speak, and listen.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

   The student will choose a specific area within their occupational field to research in detail. Use library resources to identify an issue of interest. Develop a survey instrument about this issue and use the survey with three people in the field. Report your findings, both orally and in writing.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

   Primary traits: form of the technical paper; checklist for oral presentation.
   Holistic: accuracy of oral presentation.

5. **Desirable Task Characteristics: (Check all that apply)**

   ✓ **a. authenticity**
   ✓ **b. integration**
   ____ **c. collaboration**
   ✓ **d. transfer**
   ✓ **e. tools and tech.**
   ✓ **f. multiple Intell.**
   ✓ **g. duration**
   ____ **h. time**
   ____ **i. sense of culture**

6. **Estimated time required for task:**

   Three to four weeks.

7. **Prepared by:**

   MATC Tech Prep Academy Team

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

   Work effectively in groups to accomplish a goal.

2. **Primary Enablers required (Include "home" of the task):** Technical Chemistry - 11th grade.

   Calculate and differentiate among units of composition; prepare solutions/mixtures of varying concentration.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

   You, a chemical technician, have been asked by your company to produce a safe, effective, competitively priced petro chemical for use in the home. Other employees (in English, Family & Consumer Education, Social Studies classes) will be responsible for choosing the exact product (i.e. window cleaner or windshield washer fluid). They will also be responsible for packaging, labeling, consumer surveying and testing and legal research. You will need to produce in a variety of formulations. Each formulation will be tested to see if it meets the design criteria. Reformulations may necessary to eliminate objections posed by consumer testing and legal input.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

   Primary Trait: evaluated by other students (Family & Consumer Ed. classes)

5. **Desirable Task Characteristics: (Check all that apply)**

   ____a. authenticity
   __✓__b. integration
   __✓__c. collaboration
   ____d. transfer
   __✓__e. tools and tech.
   ____f. multiple Intell.
   ____g. duration
   ____h. time
   ____i. sense of culture

6. **Estimated time required for task:**

   Two to three days.

7. **Prepared by:**

   Larry Lemmert, Neenah High School

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Work effectively in groups to accomplish a goal.

2. **Primary Enablers required (Include "home" of the task):** Art.

Cost of an item; making/giving change; communication skills; problem solving/ manipulative skills; profit/loss and graphing; unit cost; variable/fixed costs; and, math computation.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

Your goal is to raise money for a charitable cause (to be determined by students) through a popcorn sale. SWS will be responsible for purchasing supplies needed and determining costs. CD-M/S will be responsible for popcorn production and sales. Together, you will be involved in advertising your sale.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

Primary Traits: making change, manipulative skills, social interaction skills/ cooperative skills, graphing skills, math computation, problem solving/ cooperative skills.

5. **Desirable Task Characteristics: (Check all that apply)**

✓ **a. authenticity**
✓ **b. integration**
✓ **c. collaboration**
✓ **d. transfer**
✓ **e. tools and tech.**
✓ **f. multiple Intell.**
✓ **g. duration**
___ **h. time**
✓ **i. sense of culture**

6. **Estimated time required for task:**

Three days.

7. **Prepared by:**

Annette Homan, Arlen Dombrock and Joyce Mislinski

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Defend a position by integrating information from multiple sources.

2. **Primary Enablers required (Include "home" of the task):**

Social Studies: Citizenship
FACE: Family/Society Relation
Community Involvement: Expert Advice
Language Arts: Research, drama, Communication
Technology: Computer Assisted Drawing
Business: Profit Plan
Health/Science: Depends on Issue

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

Select a major issue that has been in the news headlines for the past week. (i.e. Bobbit trial, Michael Jackson case, Harding case.) Research the issue, to collect relevant data that could be used to justify and defend your position on that issue.

After data has been gathered, students will be placed in roles to bring the issue to the class in the form of a mock trial.

After the trial, individually, develop a plan to profit from the outcome of the trial. (i.e. Movie rights, marketing of a new improved product, screen plays, or legislation development.)

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

✓ **a. authenticity**
✓ **b. integration**
✓ **c. collaboration**
✓ **d. transfer**
✓ **e. tools and tech.**
____ **f. multiple Intell.**
____ **g. duration**
✓ **h. time**
✓ **i. sense of culture**

6. **Estimated time required for task:**

Four to six weeks

7. **Prepared by:**

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Defend a position by integrating information from multiple sources.

2. **Primary Enablers required (Include "home" of the task):** Biology/Speech.

Research methods; understanding of technology; persuasive speech techniques; and, appropriate vocabulary.

3. TASK: **(Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

Pick a controversial issue, research the issue, contact three experts, prepare a persuasive argument are presenting your position that also develops a scientific understanding in your audience. Be prepared to defend your position against three questions from alternative view points.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

10% on participation.
40% on research and bibliography.
40% on presentation.
10% on defending alternate stance questions.

5. **Desirable Task Characteristics: (Check all that apply)**

✓ **a. authenticity**
✓ **b. integration**
___ **c. collaboration**
✓ **d. transfer**
___ **e. tools and tech.**
___ **f. multiple Intell.**
✓ **g. duration**
___ **h. time**
✓ **i. sense of culture**

6. **Estimated time required for task:**

Two weeks.

7. **Prepared by:**

John Corbin, Pat Scheile and Doris Murphy, Kettle Moraine High School

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Defend a position by integrating information from multiple sources.

2. **Primary Enablers required (Include "home" of the task):**

Communicates scientific information and data orally, in writing, mathematically and/or pictorially. Recognize social, political and scientific factors influencing scientific process.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

Write a letter to your local congressman that outlines a specific environmental problem studied in class. The letter will include:
1) explain causes,
2) explain environmental effects,
3) explain solutions and why,
4) follow a business letter format.
Write a rough draft to include the above. Use a computer for word processing the final draft and generate a hard copy that will be mailed.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

Primary Trait: weigh each criteria equally.

5. **Desirable Task Characteristics: (Check all that apply)**

✓ a. authenticity
____ b. integration
____ c. collaboration
✓ d. transfer
✓ e. tools and tech.
✓ f. multiple Intell.
____ g. duration
____ h. time
✓ i. sense of culture

6. **Estimated time required for task:**

One to two periods.

7. **Prepared by:**

LTC and SHS

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Develop and test a hypothesis.

2. **Primary Enablers required (Include "home" of the task):** Health.

Scientific method, research, communication skills, interpret data.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

Develop and test a hypothesis in regards to:
alcohol (1st group of students)
drugs (2nd group of students)
tobacco (3rd group of students)

Simulation: (teacher only will view this)
Choose an effective way to communicate your data or results to one of the following: school, peers, community, school board, teachers, law enforcement.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

_✓_a. authenticity
_✓_b. integration
_✓_c. collaboration
____d. transfer
____e. tools and tech.
_✓_f. multiple Intell.
____g. duration
____h. time
____i. sense of culture

6. **Estimated time required for task:**

One week.

7. **Prepared by:**

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

   Develop and test a hypothesis.

2. **Primary Enablers required (Include "home" of the task):** Family & Consumer Education.

   Survey, research, statistical analysis, report writing.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

   Imagine that all the merchants in a ten mile radius decided not to sell tobacco products for one month. What would happen? Write a report or give oral class presentation.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

   ✓ a. authenticity
   ✓ b. integration
   ____ c. collaboration
   ✓ d. transfer
   ____ e. tools and tech.
   ____ f. multiple Intell.
   ____ g. duration
   ____ h. time
   ____ i. sense of culture

6. **Estimated time required for task:**

   One week.

7. **Prepared by:**

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Recognize when a need for specific information exists and demonstrate the ability to locate, evaluate, and focus that information.

2. **Primary Enablers required (Include "home" of the task):** Science.

Graphing (math); sketching (art); reading, writing analytical (reading/writing).

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

You have completed an experiment in biology and must now prepare a laboratory report. The laboratory report must include the following items in this order: Title, at least two objectives, complete list of materials and equipment used, a detailed account of the entire products including a labeled drawing of the set-up of apparatus, the hypothesis stated in the form of a prediction (IF-Then-), an account of the data in the form of tables and/or graphs, and the conclusions that can be reached (i.e., a statement of what happened and your reasoning that explain the results). The written report will be supplemented by a 5 minute oral presentation to the class.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

Analytical scale: (1-3)

(3) 1. Material presented in correct sequence and by appropriate means.
(3) 2. Objectives and hypothesis stated in the correct way.
(5) 3. Data presented and analyzed clearly and concisely.
(4) 4. Procedure presented completely and clearly.
(2) 5. Oral presentation organized and effectively communicates the sense of the experiment.

5. **Desirable Task Characteristics: (Check all that apply)**

✓ a. **authenticity**
✓ b. **integration**
___ c. **collaboration**
✓ d. **transfer**
✓ e. **tools and tech.**
✓ f. **multiple Intell.**
___ g. **duration**
___ h. **time**
___ i. **sense of culture**

6. **Estimated time required for task:**

Two days.

7. **Prepared by:**

Eleva-Strum Central High School

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Recognize when a need for specific information exists and demonstrate the ability to locate, evaluate and focus information.

2. **Primary Enablers required (Include "home" of the task):**

Reading skills, listening skills, awareness and use of technology (on-line information systems, etc.) and speaking skills. Thinking and analytical skills.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

Preset: Teacher needs to share a major news topic with the class.

Task: At this week's staff meeting, you have been selected to write the editorial concerning this topic. Your task will be to gather relevant information on the topic. After the data has been gathered, you will inform the editorial staff on your data. During the staff meeting you will analyze and interpret your data to determine if more research needs to be done or if you are ready to write your editorial.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**
Analytical Scale:
1. Did students demonstrate the ability to locate specific information?
2. Did the student present focused information to group?
3. Did the student analyze and evaluate collected data to determine if more needed to be collected, or if sufficient data was collected to begin editorial?

5. **Desirable Task Characteristics: (Check all that apply)**

✓ a. **authenticity**
✓ b. **integration**
✓ c. **collaboration**
____ d. **transfer**
✓ e. **tools and tech.**
✓ f. **multiple Intell.**
____ g. **duration**
____ h. **time**
✓ i. **sense of culture**

6. **Estimated time required for task:**

One to three class sessions.

7. **Prepared by:**

Ladysmith High School

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Recognize and communicate one's strategies for accomplishing objectives. Recognize when a need for specific information exists and demonstrate the ability to locate, evaluate, and focus that information.

2. **Primary Enablers required (Include "home" of the task):** Business & English.

Employability skills; organization of information; ask questions; interview; extract information; demonstrate usage; and, problem solving techniques.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

Your supervisor has received many complaints about telephone etiquette involving your co-workers. You have been asked to prepare a seminar (one-hour) to train the employees on how to handle difficult telephone callers.

1. Define problem: Research/interview parents and/or persons at your place of employment to gather several problems encountered in telephone conversations.
2. Within small groups, analyze problems of similar nature. Brainstorm options for handling situations.
3. Set criteria for options.
4. Evaluate criteria.
5. Demonstrate solution through role playing situations.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

Holistic grade based on participation in small groups and in handling situation in role playing.

5. **Desirable Task Characteristics: (Check all that apply)**

✓ **a. authenticity**
✓ **b. integration**
✓ **c. collaboration**
✓ **d. transfer**
✓ **e. tools and tech.**
✓ **f. multiple Intell.**
____ **g. duration**
____ **h. time**
✓ **i. sense of culture**

6. **Estimated time required for task:**

Three days.

7. **Prepared by:**

Rose Ellinger and Faye Mohr, Howards Grove High School

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Recognize and devise systems and describe their interdependence.
Recognize the influence of diverse cultural perspectives on human thought and behavior.

2. **Primary Enablers required (Include "home" of the task):** Spanish & Business.

Letter writing technique in both English and Spanish; translation skills; formatting skills.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

You have received a letter written in Spanish. You do not know Spanish. You must get help from a Spanish-speaking individual. How you go about doing this:

1. Give the letter to your Spanish partner.
2. Spanish partner translates the letter into a tape recorder.
3. Note taking student transcribes the letter using note taking.
4. Note taking student revises the letter using correct grammar, letter writing skills, etc.
5. Note taking student gives a reply to the letter.
6. Spanish student translates reply in Spanish.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

Holistic Evaluation: Spanish Students=oral dictation, translation, letter writing.
Note taking Students=notes on letter transcription, final letter produced.

5. **Desirable Task Characteristics: (Check all that apply)**

✓ a. authenticity
✓ b. integration
✓ c. collaboration
____d. transfer
____e. tools and tech.
____f. multiple Intell.
____g. duration
____h. time
✓ i. sense of culture

6. **Estimated time required for task:**

Three class periods.

7. **Prepared by:**

Kay Splittgerber and Bridget Bergnall, Florence High School

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Conceive of places, times, and conditions different from one's own.

2. **Primary Enablers required (Include "home" of the task):**

Technology Education: design; mechanical.
Math: velocity and speed; volume and area; vectors.
Science: human physiology; chemical reactions; vectors.
Language Arts: communications and stories.
Family & Consumer Education: family relations; food; clothing.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

You and your family are about to board a spacecraft to live on a space station for a year or more, to be determined.

Determine the time of departure and arrival and speed.

Plan the family structure, living conditions, food and clothing needed.

Write letters and other types of communications home: E Mail, fax, video, other voice recognition computer programs.

Comparison of physiological effects, gravity, metabolic processes, horticulture, recycling, technology of waste, oxygen regeneration.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

✓ a. authenticity
✓ b. integration
✓ c. collaboration
____ d. transfer
____ e. tools and tech.
____ f. multiple Intell.
____ g. duration
____ h. time
✓ i. sense of culture

6. **Estimated time required for task:**

7. **Prepared by:**

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Conceive of places, times, and conditions different from one's own.

2. **Primary Enablers required (Include "home" of the task):** Language Arts, History and Business Education.

Public speaking; reading skills; word processing skills; research skills; writing, editing and revising skills; critical thinking skills.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

You will choose a time period. Example time periods include: Al Capone's Chicago; The Sun King's France; Anastasia's Russia; The Beatle's England; King Tut's World; and, Frederick Douglas's America. You are to research it, exploring social conditions, class systems, medicine, industry, clothing, cuisine, fads, entertainment, family life, careers, significant historical figures/events, etc. You will present your findings to your class in an oral presentation with visual aids, as well as writing a research paper on the word processor. You are to also read a novel that is set in this time period.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

Primary Trait=research paper.
Analytical Scale=oral presentation.

5. **Desirable Task Characteristics: (Check all that apply)**

_✓_a. authenticity
_✓_b. integration
_____c. collaboration
_____d. transfer
_✓_e. tools and tech.
_✓_f. multiple Intell.
_____g. duration
_____h. time
_✓_i. sense of culture

6. **Estimated time required for task:**

One period a week set aside for in-class research and work for one quarter.

7. **Prepared by:**

Jane Porubcan, Sara Norton and Patty Wallesverd, Horicon High School

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Conceive of places, times, and conditions different from one's own.

2. **Primary Enablers required (Include "home" of the task):** Social Studies.

Social Studies: social implications and history.
Language Arts: writing and research.
Math: statistics and graphs.
Science: medical treatments and information.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

Based upon your research, compose and produce a report on a specific disease. You will be discussing the areas of treatment, both medically and socially, of victims of this disease during the turn of the century and the present. Include in your report, statistical data on such things as medical treatment, death rates, reported cases, and social implications of this disease.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

✓ **a. authenticity**
✓ **b. integration**
____ **c. collaboration**
✓ **d. transfer**
✓ **e. tools and tech.**
✓ **f. multiple Intell.**
____ **g. duration**
✓ **h. time**
✓ **i. sense of culture**

6. **Estimated time required for task:**

One month.

7. **Prepared by:**

Language Arts, Math, Science and Business Education

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Conceive of places, times, and conditions different from one's own.

2. **Primary Enablers required (Include "home" of the task):** Social Studies.

Analyze country; compare and contrast; research skills and cultural diversity.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

You are an exchange student traveling to a country of your choice. In a letter written home, explain how your life is different. Include at least five of the following issues in your letter:

*religion
*currency
*climate
*education
*family
*language
*transportation
*communication
*sanitary conditions
*recreation

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

✓ **a. authenticity**
✓ **b. integration**
____ **c. collaboration**
✓ **d. transfer**
____ **e. tools and tech.**
____ **f. multiple Intell.**
____ **g. duration**
____ **h. time**
✓ **i. sense of culture**

6. **Estimated time required for task:**

One week.

7. **Prepared by:**

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Conceive of places, times, and conditions different from one's own.

2. **Primary Enablers required (Include "home" of the task):** Technology Education.

Math: predicting, graphs.
Science: environmental.
English: research, communications.
Technology: the auto.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

Group Activity:
Study the education of the automobile. Begin by researching the average price of cars during the period 1920-1940. Make a graph of your findings and formulate an equation. Based on your data, predict the average price of a car today. Compare the actual price today to your prediction. Why is it different? Each group will investigate two different aspects: the influence of society, technological advances, and environmental concerns. Each group will give an oral presentation of their findings, with visual aids.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

____a. **authenticity**
✓ b. **integration**
✓ c. **collaboration**
____d. **transfer**
____e. **tools and tech.**
____f. **multiple Intell.**
____g. **duration**
____h. **time**
____i. **sense of culture**

6. **Estimated time required for task:**

7. **Prepared by:**

Arlen Dombrock, Peter Raphael, Sue Duerkop, Frank Fernandes and Julie Milazzo

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

   Conceive of places, times, and conditions different from one's own.

2. **Primary Enablers required (Include "home" of the task):** History.

   History: social implications/conditions.
   Science: different types of engines (Prime movers).
   Technology: video production, computers (word processing, graphics, CAD).
   Language/Communications: team work, presentation development.
   Math: computation of costs.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

   You are living in the time 1890-1910 and you and the members of your group are looking at the decision to stick with the horse and buggy or purchase a new-fangled car. Investigate the benefits and hazards of each form of transportation and present your decision. Consider the following: cost, time, convenience, resources, safety and consequences to society. Your presentation must include the use of at least three different media.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

   ✓ a. **authenticity**
   ✓ b. **integration**
   ✓ c. **collaboration**
   ___ d. **transfer**
   ✓ e. **tools and tech.**
   ✓ f. **multiple Intell.**
   ✓ g. **duration**
   ✓ h. **time**
   ✓ i. **sense of culture**

6. **Estimated time required for task:**

   One week (not including scheduling issues for various equipment).

7. **Prepared by:**

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

   Conceive of places, times, and conditions different from one's own.

2. **Primary Enablers required (Include "home" of the task):** Social Studies/ Economics.

   Develop conceptualized world view of political, cultural and economic systems.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

   Plan a "fashion show" in Russia.

   Your plan should include:

       present fashion trends in Russia,
       current economic condition,
       availability of goods and services, and
       marketing strategies.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

   Holistic: how well did the "fashion plan" reflect current economic and political realities.

5. **Desirable Task Characteristics: (Check all that apply)**

   _____a. authenticity
   _____b. integration
   _____c. collaboration
   _____d. transfer
   _____e. tools and tech.
   _____f. multiple Intell.
   _____g. duration
   _____h. time
   _____i. sense of culture

6. **Estimated time required for task:**

7. **Prepared by:**

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

   Conceive of places, times, and conditions different from one's own.

2. **Primary Enablers required (Include "home" of the task):** English.

   Creative composition.
   Social Science: research
   Guidance: family structure/schools.
   Technology Education: technology.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

   Based on current trends, predict what atypical English classroom will be like in the year 2020?
   observe current trends in Education and technology,
   analyze these trends,
   make your predictions in a written composition.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

   a. authenticity
   [✓ **b. integration**]
   c. collaboration
   [✓ **d. transfer**]
   e. tools and tech.
   f. multiple Intell.
   g. duration
   [✓ **h. time**]
   i. sense of culture

6. **Estimated time required for task:**

   Five Days.

7. **Prepared by:**

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

   Conceive of places, times, and conditions different from one's own.

2. **Primary Enablers required (Include "home" of the task):**

   Oral communication; written communication; economics; chemistry; biology.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

   A presidential task force is looking for a recommendation for the land allocation involving several hundred acres of rain forest land. Three groups of different opinions will be involved: Residents of area, Business, and Environmentalists. Task: Present an argument for the support of your position, making a recommendation on how this land should be allocated.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

   ____a. authenticity
   ____b. integration
   ____c. collaboration
   ____d. transfer
   ____e. tools and tech.
   ____f. multiple Intell.
   ____g. duration
   ____h. time
   ____i. sense of culture

6. **Estimated time required for task:**

7. **Prepared by:**

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Conceive of places, times, and conditions different from one's own.

2. **Primary Enablers required (Include "home" of the task):** Social Science.

Graphing.
Research population trends and types of solid waste.
Predicting and comparing.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

You are a team member of four solid waste engineers for New York City. You have been asked to make recommendations for the possible population solid waste disposal needs in the year 2010. You will be presenting your data to the city council and should include, but not limit yourself to, population trends, waste disposal techniques, new technologies, and cost effectiveness.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

5. **Desirable Task Characteristics: (Check all that apply)**

____ a. authenticity
✓ b. integration
✓ c. collaboration
____ d. transfer
✓ e. tools and tech.
✓ f. multiple Intell.
____ g. duration
____ h. time
____ i. sense of culture

6. **Estimated time required for task:**

Two weeks.

7. **Prepared by:**

Task Development Record

1. **Learner Outcome addressed by task (Limit to one or two):**

Conceive of places, times, and conditions different from one's own.

2. **Primary Enablers required (Include "home" of the task):**

Interview, record, analyze, project.

3. **TASK: (Address to student! Should require high levels of knowledge, a variety of thinking processes and communication skills. For more space use a blank sheet.)**

Interview parents and/or grandparents about what their typical day was like when they were 14 years old. The technologies they had available to them. Look at the technologies available to them today and project what might be available to students in the year 2008. Design an end product that presents a story as if you were the parent describing to your technology classes and the need for raising skills.

4. **Evaluation: (Holistic, Primary Trait, Analytical Scale? What criteria? To what level?)**

20% Interview
10% Predictions
30% Technologies Available Today
40% Project (End Product)

5. **Desirable Task Characteristics: (Check all that apply)**

_____a. authenticity
_____b. integration
_____c. collaboration
__✓__d. transfer
__✓__e. tools and tech.
_____f. multiple Intell.
_____g. duration
_____h. time
__✓__i. sense of culture

6. **Estimated time required for task:**

One to two weeks

7. **Prepared by:**

APPENDIX C

Wisconsin

Integrated and Applied Curricula Summer Conference

June 20-23, 1994
University of Wisconsin-Stout

Sponsored by :

Wisconsin Department of Public Instruction

Wisconsin Technical College System

In Cooperation with the Center for
Vocational, Technical and Adult Education,
at the University of Wisconsin-Stout

UW-STOUT
Menomonie
Wisconsin

Pre-Registration Form

Integrated and Applied Curricula Summer Conference

June 20-23, 1994 UW-Stout Menomonie, WI 54751

Directions: Please provide the information requested below and return as directed to your consortium leader. This information will be used to prepare materials for the June conference and also send you final information on the conference. If you have any questions about the form, please contact Mike Galloy, (715) 232-2163, or Alan Gilbertson at (715) 232-1383.

Please Type or Print Clearly

NAME: ______________________________ DATE: ______________

SCHOOL: ____

SCHOOL ADDRESS: ____
(street) (city) (zip)

HOME ADDRESS: ____
(street) (city) (zip)

SCHOOL PHONE: ( ) ______________ SCHOOL FAX: ( ) ______________

HOME PHONE: ( ) ______________

Do you want to stay in the dorm? ___yes ___no

If yes, indicate if you want a single or double room and who other person would be.

____

Do you have any special restrictions/requirements? ______________________

As part of the agenda, we are going to provide opportunities for local teams to discuss and display samples of their integrated curriculum products. We encourage you to bring samples of your curriculum materials, slides or videotapes of learning activities, and other documents. If you need special audiovisual equipment, such as a VCR or slide projector, please note it below.

Yes, we would like to discuss/display our samples.____

We would like to have available the following equipment/props:______________________

____

Will you have your vehicle on campus for the conference? _____ yes ____no
If yes, what is the license plate number?________________

Thank you. Please return as directed in the cover memo.

Please return this to your consortium leader as indicated.

INFORMATION BULLETIN
INTEGRATED AND APPLIED CURRICULA
SUMMER CONFERENCE

Dates:	June 20 - 23, 1994 Days begin at 8 am and end at 5 pm.
Location:	University of Wisconsin-Stout Menomonie, WI
Cost:	•No registration fee. •Morning/afternoon coffee breaks included. •All meals on your own. •Stipend and travel costs provided through your consortium.
Course Credit:	•One graduate credit provided for conference participation. •Participant pays segregated student fee of $15.02 for credit. •One to two additional credits available at graduate credit rate.
Registration:	• Must have attended Integrated and Applied Conference in February • Must be approved by your consortium leader to attend. • Complete and return registration form to your consortium leader. • Further information sent to participants in early June.

Lodging: Travel arrangements are responsibility of participant.

Best Western of Menomonie 1815 N. Broadway Menomonie, WI 54751 Telephone: 715-235-9651	Super 8 Motel 1622 N. Broadway Menomonie, WI 54751 Telephone: 715-235-8889

For the above motels, tell them you are with the Integrated and Applied Curricula Summer Conference/UW-Stout. Both motels have indoor swimming pools.

Bolo Country Inn
207 Pine Avenue
Menomonie, WI 54751
Telephone: 715-235-5596

UW-Stout Residence Hall	$14.00 single
Location to be determined.	$10.00 double/per person

Indicate interest in staying in dorm on pre-registration form. Further information will be sent to you on dorm location and check-in procedures. The dorms are not air conditioned. Bed and bath linens/towels are provided. Bathrooms are community bathrooms.

Integrated and Applied Curricula Summer Conference

University of Wisconsin-Stout
June 20-23, 1994

Monday (June 20) Conference meets in Harvey Hall Auditorium

8:00-9:00	**Registration**: Harvey Hall Auditorium •Participant Conference Packet. •Enrollment for one credit/payment for segregated fee.
9:00-9:30	**Welcome/Overview of Conference/Goals & Objectives:** Auditorium •Mike Galloy: Project Director, UW-Stout. •Gabrielle Wacker: Tech Prep Consultant, WTCS. •Mary Jane Best Louther: Tech Prep Consultant, DPI.
9:30-10:30	**Keynote Speaker: "Curriculum Change: Innovations, Integration and Application."**: Auditorium •M. James Bensen: President Dunwoody Institute.
10:30-10:45	**Break** (area outside auditorium)
10:45-11:45	**Team Building Skills**: Auditorium **•Team Decision Making** **•Team Building Techniques** **•Different Leadership Skills and Styles** •Beth Dailey: Dean of Lakeland Campus and Outreach Education, Nicolet Area Technical College.
11:45-1:00	**Lunch** (participants on own: Student Center, Area restaurants, etc.)
1:00-2:00	**Application: Team Building Simulation.** (Home Teams: refer to room assignment sheet for your consortium; facilitator will direct you to room.) •Assistance from Facilitators/Beth Dailey
2:00-2:30	**Discuss Team Building Simulation**: Auditorium •Beth Dailey
2:30-2:45	**Break** (area outside auditorium)
2:45-3:45	**Wisconsin Integrated and Applied Curriculum Development Process. Speaker to discuss the framework and process for integrated and applied curricula model:** Auditorium •Susan M. Grady, Chief, Program Development Section, DPI.

3:45-4:15 **Question and Answer period.**

4:15-5:00 **Home Teams Review Day's Activities:** (Refer to room assignment sheet for your consortium; facilitator will direct you to room.)

4:14-5:00 **UW Faculty Meeting:** Auditorium

5:00-5:45 **Facilitator Orientation for Days 2-4:** Harvey Hall 303

OPTIONAL ATTENDANCE

5:00-5:30 Discuss University Credit & Independent Study.
Meet in Harvey Hall Auditorium for overview by Howard Lee

Tuesday (June 21) Conference meets in Great Hall of the Student Center

8:00-9:30 **Panel Presentation on Wisconsin Integrated and Applied Curriculum Development Process.**
•Presentation from educators actively involved in integrated and applied curriculum activities.
•Question and answer period on the integrated and applied curriculum development process.

•John Fortier: English/Language Arts Assessment Consultant, DPI
•Howard Kallio, Ann Ward, Kathryn Thompson, John Cicero and Laura Taylor: South Milwaukee High School

9:30-9:45 **Break** (Great Hall)

9:45-10:45 **Home Teams Work on Applying the Wisconsin Integrated and Applied Curriculum Development Process to their Schools (in units, courses and/or programs). (Apply Team Skills)**
(Great Hall: Meet as a consortium; location to be identified.)

10:45-11:15 **Question/Answer Period.**

11:15-12:00 **Home Teams Continue Work on Applying the Wisconsin Integrated and Applied Curriculum Development Process to their Schools.**

12:00-1:15 **Lunch** (participants on own: Student Center, Area restaurants, etc).

1:15-2:15 **Share and Tell (1/2 of Districts Display Their Integrated and Applied Curriculum Materials.** (Great Hall)

2:15-2:30 **Break** (Great Hall)

2:30-3:30 **Teaching Strategies for Integrated and Applied Curriculum Materials.**
•Cooperative Learning.

•Hector Cruz: Assistant Professor, Dept. of Education, UW-Stout.

3:30-4:30 **Special Interest Sessions.** (Team Members Attend Different Sessions.) All rooms located in Student Center.

- **Learning Styles:** Linda Riley (UW-Stout: Gender Equity Coordintor) Northwoods Room.
- **Needs Assessment Techniques:** Orv Nelson (UW-Stout: CVTAE) White Pine Room.
- **Leadership Styles-Myers-Briggs:** Sherri Johnson (UW-Stout: SIT) Room 123.
- **Multiple Intelligences:** Don Viegut (Merrill School District) Cedarwood/Maplewood Room.
- **Tie in Wisconsin Developmental Guidance Model with Learner Outcomes:** Dutch Van Den Heuvel (UW-Stout: Counseling & Psych Services) Badger Room.
- **Teaching Strategies:** Follow-up discussion: Hector Cruz (UW-Stout: Dept. of Education) Prairie/Pioneer Room.
- **Integration Techniques:** Ken Welty (Associate Professor, Communication, Education & Training Dept., UW-Stout) Great Hall.

OPTIONAL SESSIONS:

4:30-5:00 **Questions/Answers on Independent Study** (Great Hall)

- Howard Lee: Associate Dean, School of Industry and Technology, UW-Stout.

7:00-7:45 **DACUM Presentation** (Cedarwood/Maplewood Room of Student Center)

- Orville Nelson: Director, CVTAE, UW-Stout

Wednesday (June 22) Meet in Harvey Hall Auditorium

8:00-9:15 **Presentation: Authentic Assessment-Strategies & Tools.** (Auditorium)

- Donna Moll: Director of Curriculum, Middleton School District.

9:15-11:15 **Home Teams Work On:**
- **Teaching Strategies**
- **Assessment Strategies and Techniques**
- **Curriculum Integration**
- **Team Building Skills**

(Refer to room assignment sheet for your consortium; facilitator will direct you to room.)

Break during this session (break items delivered to your area.)

11:15-11:45 **Questions and Answers.** (Auditorium)
11:45-1:00 **Lunch** (participants on own: Student Center, Area restaurants, etc.)

1:00-2:00 **Share and Tell (1/2 of Districts Display Their Integrated and Applied Curriculum Materials.** (Construction Lab of Tech Wing)

2:00-2:15 **Break** (Construction Lab)

2:15-3:15 **Presentation-Organizational and Personal Change.** (Auditorium)

- Ed Biggerstaff, Dean, School of Education and Human Services, UW-Stout.

3:15-4:15 **Application of Change Techniques: Work Session.** (Refer to room assignment sheet for your consortium; facilitators will direct you to room.)

4:30 **Questions and Answers.** (Auditorium)

4:30-5:00 **Planning for Change (Overview of what will occur in Thursday's Sessions).** (Auditorium)

OPTIONAL SESSIONS:

7:00-9:00 **7 Habits of Highly Effective People** (Cedarwood/Maplewood Room of the Student Center)

- Sylvia Nelson: Career Planning Instructor, Menomonie Campus, Chippewa Valley Technical College

Mentoring. (Room 123 of the Student Center)

- Howard Lee: Associate Dean, School of Industry and Technology, UW-Stout

Thursday (June 23) Meet in Great Hall of the Student Center

8:00-8:30 **Roles of the Integrated and Applied Curriculum Leadership Cadre.**

•Mike Galloy, Mary Jane Best-Louther, Gabrielle Wacker

8:30-9:30 **Strategic Planning Techniques.** (Great Hall)

•Jim Schultz, LVEC/Education for Employment Coordinator, Edgerton Public Schools.

9:30-11:15 **Home Teams Work on Strategic Plans.** (Great Hall: meet as consortium, location to be identified)

Break during this session (Great Hall)

11:15-11:45 **Questions and Answers.**

•Jim Schultz.

11:45-1:00 **Lunch** (participants on own: Student Center, Area restaurants, etc).

1:00-1:45 **Action Planning:**
•Purpose
•Technique
•Format
(Great Hall)

•Howard Lee, Associate Dean, School of Industry and Technology, UW-Stout.

1:45-3:30 **Home Teams Work On Action Plans.**
•Team Plan
•Individual Plan
(Great Hall)

•Assistance from Howard Lee and Facilitators.

Break during this session (Great Hall)

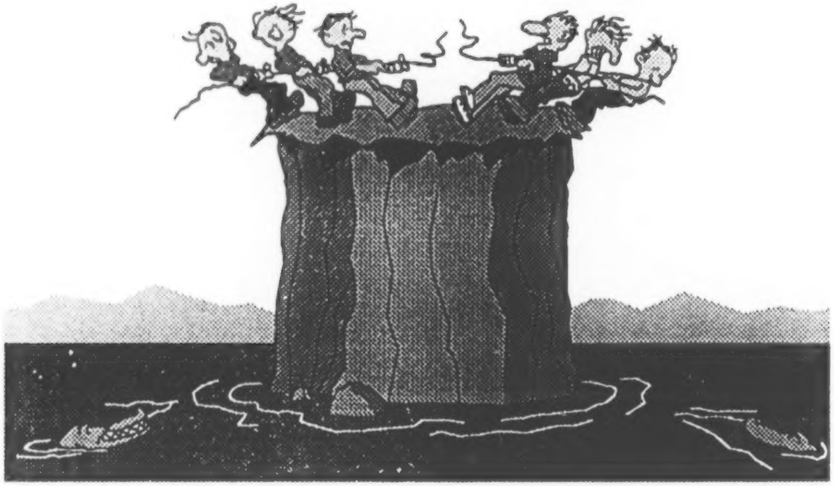
3:30-4:30 **Teams Share Plans Within Their Tech Prep Consortiums**
(Great Hall)

4:30-5:00 **Closing Ceremony:**
•Present Certificates
•Participants turn in Evaluation Form

THANK YOU FOR ATTENDING THIS CONFERENCE.
HAVE A SAFE TRIP HOME AND ENJOY THE SUMMER!!!!

Integrated and Applied Curricular Summer Conference

TEAM BUILDING SKILLS FOR TRAINERS



June 20,1994

Presented by: Beth A. M. Dailey
Nicolet Area Technical College

INTEGRATED AND APPLIED CURRICULAR
SUMMER CONFERENCE
University of Wisconsin, Stout

TEAM BUILDING SKILLS FOR TRAINERS

June 20, 1994

COMPETENCE: Practice team decision making structures and strategies.

LEARNING OBJECTIVES:

1.1 Develop ground rules to be used in a team problem solving activity.
1.2 Utilize operational definitions in a team problem solving activity.
1.3 Practice either multi-voting or 10-4 voting in reaching a decision through consensus.
1.4 Utilize a matrix in a problem solving activity.
1.5 Assume a team member role when participating in a team problem solving activity.

WORKSHOP OUTCOMES:

Develop a plan for structuring applied curricular teams in your local district.
Develop strategies for continued professional development in the area of team building and management and planning tools.

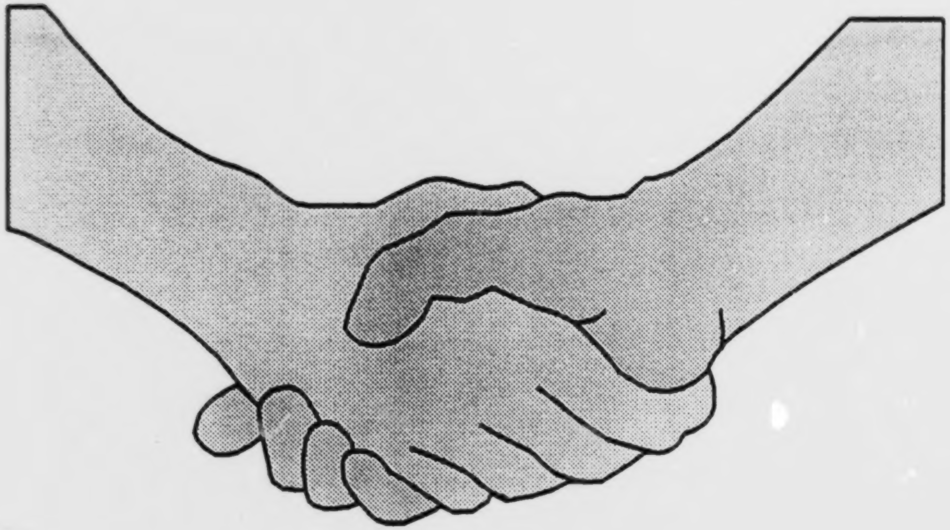
INTEGRATED AND APPLIED CURRICULAR
SUMMER CONFERENCE
University of Wisconsin, Stout

TEAM BUILDING SKILLS FOR TRAINERS
June 20, 1994

AGENDA

10:45 a.m.	Warm-up Exercise and Workshop Introduction
10:50 a.m.	Ground Rules
10:55 a.m.	Operational Definition
11:15 a.m.	Establishing Consensus Consensus Defined Consensogram Multi-Voting and 10-4 Voting Group Decision Making Work Sheet
11:40 a.m.	Team Member Roles and Responsibilities
11:45 a.m.	Lunch
1:00 p.m.	Problem Solving Activity - Murder One Introduction Activity Discuss Lessons Learned
2:00 p.m.	Summary Team Structures Skills developed Ideas for Consideration
2:25 p.m.	Feedback

How committed are you to implement new team structures and strategies in your home district?



WORKSHOP GROUND RULES

- START ON TIME, END ON TIME
- BE AS RELAXED OR AS INFORMAL AS YOU WISH
- PARTICIPATE AND ALLOW PARTICIPATION
- LISTEN INTENTLY TO OTHERS; EVERYONE BRINGS A WEALTH OF EXPERIENCE WITH THEM
- TREAT EACH OTHER WITH RESPECT
- WORK TOGETHER AS A TEAM
- ALL QUESTIONS AND IDEAS ARE WELCOME. PLEASE SHARE SO WE CAN ENHANCE OUR LEARNING TOGETHER
- DECISIONS WILL BE MADE BY CONSENSUS OF THE MEMBERS PRESENT

Ground Rule Categories

MEETING TIME AND PLACE:

ATTENDANCE:

PARTICIPATION/DISCUSSION RULES:

INTERPERSONAL RELATIONS:

DECISION MAKING:

SUPPORT FOR TEAM DECISIONS:

INTERRUPTIONS:

AGENDAS, MINUTES, RECORDS:

ASSIGNMENTS:

OTHERS, AS NECESSARY:

Operational Definitions

Operational Definitions provide clear explanations of terms.

Operational Definitions eliminate waste.

Operational definitions provide foundation for improvement.

Operational Definitions are used for a common language.

Operational definitions define quality measures.

Operational Definitions are vital for teamwork.

Common learning organization terms which need to be operationally defined:

Tardy
Absence
Grade
Quality
Student
Teacher
Administrator
Internal Customer
External Customer

Operational definition example:

Quality Learning:

Quality in learning is the continuous improvement of systems to enable the optimum state of personal, social, physical, and intellectual development of each individual which will result in society and colleague loyalty now and in the future.

David Langford

One Day Seminar

Education operational definitions:

School Boards, Superintendents, Principals and central office support personnel are:

Management - These individuals have the responsibility to lead by enabling, to foster project teams and to constantly seek opportunity for improvement in every process and service of the school organization. They have systems level responsibility.

Teachers are:

Leader/managers - Teachers continually work on improving classroom systems and work with students to improve the instructional process. Teachers continually look for improvement opportunity in both special and common causes. Teachers are the experts in their work area and are considered first level managers.

Students are:

Co-managers - They are responsible to manage and improve their own personal processes and participate with the teacher in the management of the classroom.
Customers - Each student involved in the education process is receiving a service and deserves to be happy, satisfied and to have their needs anticipated.
Product - In one sense, students are the product produced by the education process.
Managers - They are capable of improving their own quality of life by monitoring their own actions and managing themselves, their work processes and peer groups.
Colleagues - The most important change in the definition of students is raising their status to that of colleague. Colleagues are people we work with - not people we do things to.

Parents, businesses and community are:

Customers - Parents, businesses and community are paying for education service and are customers to be satisfied.
Co-managers - We also want parents to be part of the decision making process and actively involved in improvement processes.

Support Services are: (i.e. Contracted services such as food service, security etc.)

Suppliers of product and service, are expected to learn quality methodology, implement continuous improvement within their organization and work to establish long term relationships.

Student Sources

Any school, organization, or parental structure which educates incoming students is a student source or supplier. Schools work with these sources to improve incoming students and to establish long term, cooperative relationships.

Operational Definition - Activity

Directions:

Individually list the first (10) words that come to mind when you hear the word "team building" ("integrated/applied curricula"). Review your list with the person next to you and determine the number of common words.

TEAM BUILDING	INTEGRATED/APPLIED CURRICULA
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.
7.	7.
8.	8.
9.	9.
10.	10

DISCUSSION:

1. Establish as operational definition.

CONSENSUS

Definition:

Consensus is the willing acceptance and support of a decision by all members of the team. Ideal consensus results when the entire group becomes one mind and understanding. Practical consensus results when theirs is a majority view, and the minority is willing to act in a unified manner.

Process:

Consensus is based on the term "to consent" as in "to grant permission.: To arrive at consensus is to give permission to go along with the group (the majority). The implication of consensus is that an individual can negotiate the terms by which he/she will grant his or her permission. Each individual has the right and obligation to make his or her terms known.

Consensus is arrives at without voting, through a process whereby the issues are fully aired, all members feel they have been adequately heard, and everyone has equal power and responsibility. Different degrees of influence - due to individual stubbornness or charisma - are avoided, so that all are satisfied with the process.

It requires that members possess an awareness of the paradox between the preciousness both of people and of time - including knowing when the solution is satisfactory, and it is time to stop and not reopen the discussion until the group determines a need for revision.

Consensus Means...	**Consensus Does NOT Mean...**
All members contribute.	A unanimous vote.
All members' opinions are heard fully, frankly, and respectfully.	A majority vote.
All members have been honest.	Everyone agrees (there may be only enough support for the decision to be carried out.)
All relevant information has been shared	Conflict or resistance will be overcome immediately.
Those who disagree indicate a willingness to experiment for a certain period of time.	
All member "own " the final decision.	
All members agree to take responsibility for implementing the final decision	

ESTABLISHING CONSENSUS

- **CONSENSOGRAM**

  A picture of how everyone feels about the concept.

- **DISCUSSION PROCEDURE**

  - **discuss options/solutions**
  - **identify the best (20% rule)**
  - **pros/con analysis**
  - **define criteria for solutions**
  - **discuss feelings**
  - **determine number of solutions to accept**
  - **agree on best**

- **MULTIVOTING**

  Participants choose several items from the list they would like to explore ("several could be up to 1/3 of the numbered items.") After tallying the groups notes, eliminate those not voted on or which received an insignificant number of votes. Continue the multivoting until only three items remain. If more than one item emerges as a top priority, discussion is needed to reach a decision.

- **10 -4 VOTING**

  Each participant uses 10 points to weight the items being voted on. the total 10 points must be used, and up to but not more than 4 points can be applied to one item. After voting, group totals are determined. This may be repeated until a top priority item emerges, or discussion may be used to reach final agreement

ESTABLISHING CONSENSUS ACTIVITY

The group task is to arrive at one overall ranking from 1-3, of the characteristic which is agreeable to all members of the group. Two rules are:

1. Voting to determine rank is NOT permitted.
2. Numerical averaging of the individual ranks is NOT permitted.

Utilize a matrix to display the relationship between members and their selections as well as the weight of their selection. Solve this task through discussion.

Select and rank three of the following characteristics which you believe to be most important for a leader?

Rank
______ 1. Well-organized
______ 2. Sense of humor
______ 3. Intelligence
______ 4. Interest in people
______ 5. Patience
______ 6. Physical health and vigor
______ 7. Understands people
______ 8. Fairness
______ 9. Good moral character
______ 10. Doesn't play favorites
______ 11. Open to change
______ 12. Willing to admit mistakes
______ 13. Respect in community

Organize the group's responses on the attached matrix.

The group's three most important characteristics in the list are:

1. ______________________________

2. ______________________________

3. ______________________________

Leadership Characteristic Matrix

Characteristic **Member Names**	Well organized	Sense of humor	Intelligence	Interest in people	Patience	Physical health and vig	Understands people	Fairness	Good moral character	Doesn't play favorites	Open to change	Willing to admit mistak	Respect in community	
1														
2														
3														
4														
5														
6														
7														
8														
9														
10														
TOTALS														

3 = High Priority 1 = Low Priority

MATRIX

Matrices provide a simple way to correlate one factor against another.

Matrices are useful for prioritizing.

Matrices can let each person see how their job relates to the whole process.

Matrices can be three dimensional.

Matrices can be easily combined with other tools such as the flow tree diagram to create powerful accomplishments implementation tools.

Key places in learning organizations to use Matrices:

Training personnel
Instruction for students
Materials
Resources
Personnel
Facilities
Levels of learning
Setting priorities
Tracking

MURDER ONE INSTRUCTION SHEET

Instructions

1. The threat of violence between various factions of organized crime, over the control of narcotics, imperils the tranquility of your community. To combat this threat, the commissioner has directed a step-up in the activity against criminal organizations within your community.

2. You are a group of top detectives who have been assigned to the Organized Crime Bureau within your department.

3. Charly "Poppa" Hasson's gang has been singled out for particular attention by your team.

4. Your task becomes complicated when murder occurs during your investigation.

5. Your task, as a group, is to single out one suspect from members of the Hasson gang. Circumstantial evidence may be used to identify and arrest one member of the gang. The remaining six suspects must be cleared for a specific reason, which you as a group must declare at the termination of the activity. Data has been supplied regarding the suspects. Your team has all the information necessary for the solution of the case.

Assumptions

1. Assume that there is one solution.

2. Assume that all data are correct.

3. You have forty-five minutes in which to determine a suspect.

4. Assume that today's date is July 7, 1977, and that all primary actions are taking place on this date.

5. There must be substantial agreement in your group that the problem is solved.

6. You must work the problem as a group.

BEST COPY AVAILABLE

Structured Experience Kit
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University Associates, Inc.
San Diego, California

MURDER ONE SUSPECT DATA SHEET

Viron, Benjamin ("Benjie") M-W-49
Height: 5'4" Weight: 220 Hair: Gray/Brown Eyes: Brown
Blood Type: B Shoe: 7½D Tattoos: Right arm, "Mother"
Vehicle: 1973 Mercedes Dark Blue Sedan
Record: 17 arrests--Charges: Gambling, Loansharking, Extortion, Assault, Narcotics, Robbery, Rape

Enopac, Alphonse ("Jumbo") M-W-52
Height: 5'7" Weight: 245 Hair: Black/Gray Eyes: Brown
Blood Type: A Shoe: 8D Tattoos: Left arm, "Al & Eloise"
Vehicle: 1974 Lincoln Black Sedan
Record: 26 arrests--Charges: Gambling, Narcotics, Extortion, Assault, Statutory Rape, Homicide

Ollag, Joseph ("Chills") M-W-52
Height: 5'7½" Weight: 180 Hair: Brown Eyes: Brown
Blood Type: A Shoe: 8D Tattoos: None
Vehicle: 1972 Cadillac Black Sedan
Record: 20 arrests--Charges: Gambling, Narcotics, Assault, Extortion, Homicide

Phelps, James ("Digger") M-W-52
Height: 5'7" Weight: 210 Hair: Black/Brown Eyes: Blue
Blood Type: B Shoe: 7½D Tattoos: Chest, "Blue Birds"
Vehicle: 1973 Cadillac Dark Green Sedan
Record: 30 arrests--Charges: Gambling, Narcotics, Assault, Robbery, Loansharking, Homicide

Sutter, Edward ("Blue Eyes") M-W-51
Height: 5'7" Weight: 240 Hair: Black/Gray Eyes: Blue
Blood Type: B Shoe: 7½D Tattoos: Right arm, "For God & Country"
Vehicle: 1974 Chrysler Black Sedan
Record: 12 arrests--Charges: Gambling, Loansharking, Assault, Rape, Extortion

Lagas, Franklin ("Hot Dog") M-W-50
Height: 5'7" Weight: 235 Hair: Black/Gray Eyes: Brown
Blood Type: B Shoe: 8D Tattoos: None
Vehicle: 1973 Cadillac Black Sedan
Record: 19 arrests--Charges: Homicide, Robbery, Assault, Extortion, Narcotics, Gambling, Impairing Morals of a Minor

Aifam, George ("Gypsy") M-W-39
Height: 5'7½" Weight: 245 Hair: Black Eyes: Brown
Blood Type: B Shoe: 8D Tattoos: Left arm, "To Mother with Love"
Vehicle: 1973 Lincoln Black Sedan
Record: 23 arrests--Charges: Gambling, Loansharking, Assault, Extortion, Homicide

TEAM ROLES/RESPONSIBILITIES

Member Duties

- Help keep facilitator neutral and out of content.
- Help keep recorder neutral and recording accurately.
- Use facilitative behavior, tools, and techniques.
- Focus your energy on content of the problem.
- Keep an open mind.
- Change seat to avoid cliques.
- Do not be prematurely negative.
- Support your ideas; do not defend them.
- Do not cut off other members or put words in their mouths.
- Contribute information needed to solve problems.
- Gather information when needed to help solve problems.

Recorder/Timekeeper Duties

- Captures basic ideas on large paper in full view of group.
- Does not edit; not corrupted by power of the pen.
- Records enough of the speaker's idea so it can be understood later.
- Does not write down every word; listens for key words.
- Remains neutral.
- If the recorder gets behind, stop group.
- Write fast and large.
- Do not be afraid to misspell.
- Put legend on each sheet.
- Remind team of approaching time deadlines.

Leader Duties

- Begins/ends meetings.
- Maintains all roles and responsibilities.
- Guide without dominating.
- Becomes an active participant.
- Contributes his/her ideas.
- Involves all members.
- Invokes operating procedures when needed.
- Is clear about organization constraints.
- Sticks to agenda.
- Uses facilitative behavior.
- Focuses energy of group on a common task.
- Protects individuals and their ideas from attack.
- Helps group reach consensus.

Facilitator Duties

- Is a neutral servant of the group.
- Neither evaluates nor contributes technical ideas.
- Suggests alternative methods and procedures.
- Encourages full participation.
- Helps group reach consensus.
- Reflects feelings and questions back to group.
- Helps run the meeting "from the back of the room."
- Keeps team on-track.
- Assists leader as required.
- Not afraid to make mistakes.
- Not defensive.

TEAM BUILDING SKILLS FOR TRAINERS

Competencies	Learning Objectives	How could I implement this concept?	What additional resources do I need?	What additional knowledge or skills do I need?
	Ground Rules			
	Operational Definition			
	Consensogram			
Practice team decision making structures and strategies	Discussion Skills			
	Multi-Voting/ 10-4 Voting			
	Matrices			
	Team Member Roles			

AH HA'S

STRATEGIES

Teamstou doc 6/10/94

STUDENT FEEDBACK FORM

DATE:____________

SESSION:____________

THINKING IT OVER . . . .

I LEARNED:

I WOULD HAVE LIKED:

I WOULD LIKE TO KNOW MORE ABOUT:

I PLAN TO:

I LIKED:

A PROBLEM I SOLVED TODAY WAS:

I AM:

NAME__________________ OPTIONAL

THANK-YOU !

ADOPTE FROM A FORM DEVELOPED BY SEDNEY R. HOHN, UNIVERSITY OF NEBRASKA AT HENCOLN 1985

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At 10:15 p.m., the first unit of the team arrives and observes that the club door is ajar and Hasson's car is parked outside. The area seems deserted, and only one light flickers through the open door. It appears from the outside that someone is lying on the floor. A decision is made to move in for a better look. Closer scrutiny reveals Charly's body lying face down on the floor. He is

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The forensic unit thoroughly searches the premises and comes up with prints belonging to Poppa; other prints are not distinguishable and cannot be classified. The weapon located at the scene is a .44 magnum of undetermined origin--no prints are obtained from the gun. Blood stains seem to indicate a fierce struggle, and apparently Charly had almost made it to the door. The blood stains on the floor fall into two groupings: A and B. Charly had bled profusely and beneath his fingernails are tufts of hair. Further investigation reveals a footprint in the tomato patch below the window at the rear of the club. The print seems to be anywhere from a size 7D to a size 8D; it is somewhat distorted and was made by a man of greater-than-average weight. (This is determined by a mold made at the scene and a measurement of the height of the drop from the window to the ground.) Pressure from the hierarchy of the department demands a quick solution to this case, especially in view of the recent mass arrests made by the Joint Task Force. On the basis of the facts herein your team is directed to make a prompt arrest.

The most likely suspects are the members of Charly "Poppa" Hasson's gang. It would seem likely that Charly called a member of the gang and made an appointment with his killer. All the information available to your team can be culled from the Briefing Sheet. Your task is to identify the killer by using the facts available....

MURDER ONE: INFORMATION SHARING

Goals

I. To explore the effects of cooperation-collaboration versus competition in group problem solving.

II. To demonstrate the need for information sharing and other problem-solving strategies in a task-oriented group.

III. To study the roles that emerge in a task group.

Group Size

At least two groups of five members each.

Time Required

One and one-half hours.

Materials

I. A copy of the Murder One Instruction Sheet for each participant.

II. A copy of the Murder One Suspect Data Sheet for each participant.

III. One set of Murder One Briefing Sheets for each group, a different sheet for each members. (Each of the five sheets is coded by the number of dots, ranging from one to five, at the end of the first and last paragraphs. Each sheet contains data that is not found on another sheet in that set.)

IV. Blank paper and a pencil for each participant.

V. A Murder One Solution Sheet for each participant.

VI. Newsprint and a felt-tipped marker.

Physical Setting

A room large enough for groups to meet simultaneously without disturbing each other or overhearing each other's solutions to the problem. Each group should have a table and chairs at which the members may work. (An alternative is to have a separate room for each group, in which it can work during the problem-solving phase.)

Process

I. The facilitator introduces the activity as a group problem-solving task. (He does not discuss at this time the need to share information.)

II. The facilitator divides the participants into groups of five members each. If there are four or less participants remaining, they may serve as process consultants.

III. The facilitator explains that each group's task is to decide who is the suspect to be arrested on a charge of first-degree murder. He indicates that there is only one correct solution to the problem and that each group is to reach its decision independent of the other groups. He also says that when a group completes the task, its members may observe other groups still in process, but they may not interfere with or join the other group in any way.

IV. The facilitator distributes a Murder One Instruction Sheet, Briefing Sheet, and Suspect Data Sheet, as well as paper and a pencil to each participant. He takes care to see that each member of a group has received a different Briefing Sheet (with a different number of dots following the first and last paragraphs).

V. The facilitator may privately brief any process consultants on what to look for during the group process. They are instructed to intervene as they deem necessary to help a group to clarify its process, and they are told not to participate in the group's discussion of the content. The facilitator then tells the groups that they have forty-five minutes in which to solve the problem and that they are to record their reasons for eliminating each suspect. He gives the signal to begin.

VI. When all groups have reached a decision, or at the end of forty-five minutes, the entire group is reassembled. Each group reports on its solution, and the facilitator may briefly outline the elimination process on newsprint. Then the Murder One Solution Sheets are distributed and explained.

VII. The facilitator then leads a discussion of the experience, focusing on the effects of collaboration and competition, the need to share information in problem solving, the roles that were played by group members, and other task-related strategies or group dynamics.

Variations

I. The situation and information can be adapted to suit the needs and background of the group.

II. Observers can be assigned to specific groups or can be directed to look for specific aspects of the group process.

III. The facilitator can inform the participants that the data sheets contain different information.

IV. The facilitator can increase competition between groups by posting the amount of time used by each group in accomplishing its task and by posting the solution arrived at by each group.

Submitted by Donald K. McLeod.

Originally published in J. W. Pfeiffer & J. E. Jones (Eds.), *A Handbook of Structured Experiences for Human Relations Training* (Vol. VI), San Diego, CA, University Associates, 1975.

Structured Experience Kit
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MURDER ONE SOLUTION SHEET

Note: Items printed in bold face indicate why the suspect could not have committed the crime. Everyone is eliminated except . . .

Name	Height	Weight	Age	Blood Type	Occupation at 7 p.m. (free to make phone call)	Occupation at 10 p.m. (free to commit murder)
Viron, Benjamin ("Benjie")	5'4"	220	49	B	Unknown	Unknown
Enopac, Alphonse ("Jumbo")	5'7"	245	52	A	Unknown	Unknown
Ollag, Joseph ("Chills")	5'7½"	180	52	A	Near social club	Unknown
Phelps, James ("Digger")	5'7"	210	52	B	**Conducting union meeting**	Unknown
Sutter, Edward ("Blue Eyes")	5'7"	240	51	B	Near social club	Unknown
Lagas, Franklin ("Hot Dog")	5'7"	235	50	B	Near offtrack betting office	**In custody of Joint Task Force**
Aifam, George ("Gypsy")	5'7½"	245	39	B	Near offtrack betting office	Unknown

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1. Teachers experiment with others with whom they enjoy working to develop and teach an applied and integrated task during the current semester;

2. Teachers examine their own instructional units to determine which WLOs are being targeted adequately and which are not;

3. Results of individual teacher reviews of instructional units are compiled for the school and gaps are identified; and

4. Collaborative groups of teachers, counselors, and administrators meet to determine how and where in the existing school curriculum the underrepresented WLOs should be targeted. This could involved school restructuring, redesign of the school schedule, reassignment of staff and the like.

5. Teachers meet in cross-disciplinary groups which include counselors, parents and representatives of business, industry, labor, and the community to design instructional tasks and assessment instruments that address the WLOs.

Draft 6/94

Wisconsin Learner Outcomes	Students have extensive opportunities to develop this WLO in this unit (✓)	Students have some opportunities to develop this WLO in this unit (✓)	Students have few opportunities to develop this WLO in this unit (✓)
1. Identify, develop, evaluate, and apply criteria to ideas, products, and performances of one's self or others.			
2. Revise a product, performance, system, and idea in response to relevant information.			
3. Make informed decisions by examining options and anticipating consequences of actions.			
4. Achieve desired results by interpreting and executing instructions, plans, models, and diagrams.			
5. Recognize and devise systems and describe their interdependence.			
6. Create a quality product, process, and performance to meet a need.			
7. Respond to the aesthetic and intellectual aspects of an event, performance, and product.			
8. Transfer learning from one context to another.			
9. Recognize, define, and solve a problem.			
10. Recognize and communicate one's strategies for accomplishing objectives.			
11. Work effectively in groups to accomplish a goal.			
12. Defend a position by combining information from multiple sources.			
13. Develop and test a hypothesis.			
14. Recognize when a need for specific information exists and demonstrate the ability to locate, evaluate, and use the relevant information.			
15. Conceive of places, times, and conditions different from one's own.			
16. Identify personal interests and goals and pursue them.			
17. Recognize the influence of diverse cultural perspectives on human thought and behavior.			

Unit________________________ Course____________________________________

Teacher____

Draft 6/94

Figure 3. Unit Review Worksheet for Wisconsin Learner Outcomes

1. Form a cross-disciplinary team to create instructional task(s).
2. Select Wisconsin Learner Outcomes (WLOs) to be developed through the task.
3. Identify knowledge and processes to be developed or reinforced through the task.
4. Write the instructional task(s).
5. Identify how parents, business, industrial, labor and professional representatives can participate in the development, presentation, or assessment of the task.
6. Identify assessment criteria based on WLOs and knowledge and processes.
7. Design the assessment form.
8. Develop a resources, materials and "to-do" list.
9. Determine benchmark activities and dates so that students will be better able to assess their progress during the course of the task.
10. Review task to ensure that challenging academic content is included.
11. Review task to ensure that the quality is consistent with what research tells us about effective teaching-learning strategies and conditions.
12. Review task for gender, race, age, ethnic or disability bias or stereotyping.
13. Explore career connections of the task.
14. Write student guide.
15. Plan follow-up activities.

Figure 4. Steps in Task Development

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Career Connections

1. After completing this task. (check the one that most applies)

___a. I have a high level of interest in this type of activity. (I enjoyed it.)

___b. I have a moderate (average) level of interest in this type of activity.

___c. I DID NOT enjoy this type of activity.

2. The part I enjoyed most was:______________________________

3. The part I enjoyed least was:______________________________

4. Has the task helped you discover something you are good at? If so, what?

5. What are three career clusters where the work involves this task or the activities you just completed?
    1.
    2.
    3.

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6. How has the task provided you with insight into a personal career choice?

7. Has the experience introduced you to a non-traditional career? (Non-traditional careers are those that have been traditionally dominated by one gender or the other. For example, traditionally, nursing has been dominated by women and engineering has been dominated by men.)

8. Think about the activities in the task you just completed. How might you do these same kinds of activities in:

a. A career?____________________________

b. Leisure?____________________________

c. Civic or Volunteer efforts?____________________

9. Did you enjoy the task well enough to consider an internship or work experience in a related occupation?

10. If you did enjoy the task, what are the educational requirements of the related occupations?

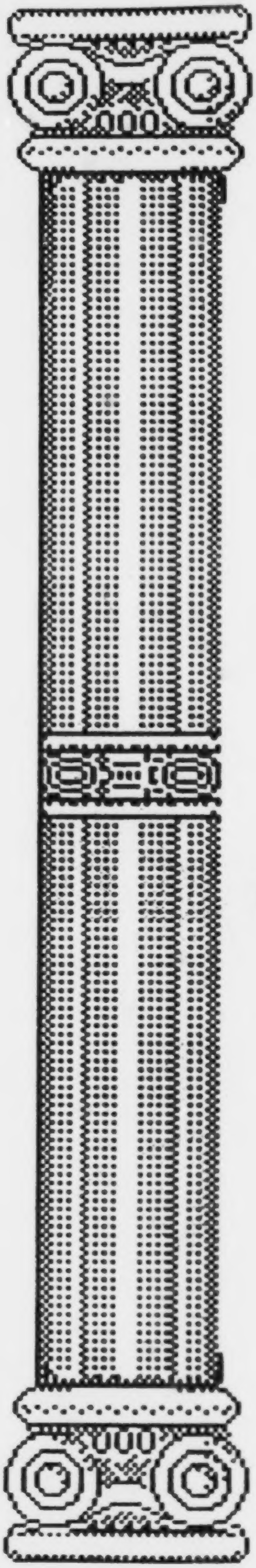
11. At this time, my 3-year career plan is:____________________________

12. At this time, my 5-year career plan is:____________________________

13. At this time, my 10-year career plan is:___________________________

For further information about related career choices, please ask your teacher for the career cluster map book or ask any of the following people for information: a vocational-technical teacher in your school, counselor or a local business person.

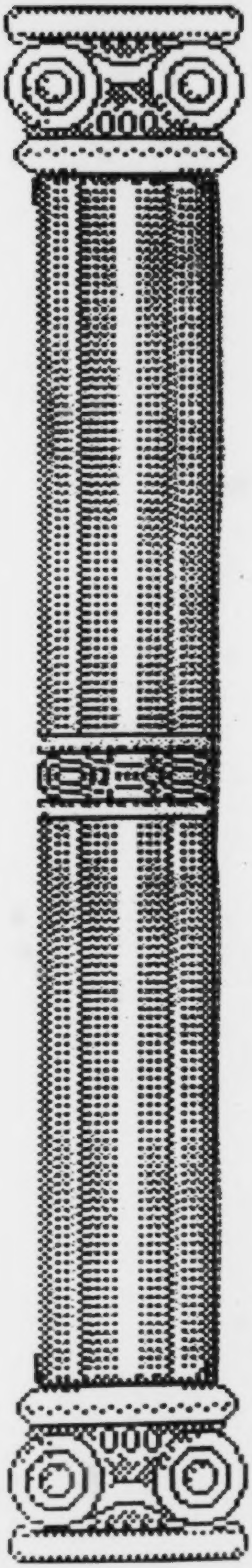
Figure 5. Career Connections of Tasks for Classroom Discussion



Tech Prep Team

c/o

South Milwaukee
High School
1001 15th Ave.
South Milwaukee,
Wi.
53172



1. **Introductions**

2. **In the Beginning**
   - There was darkness
     - Freshman Failures
     - Transition Fears
     - Inconsistence Expectations
     - Curriculum Redundancy
     - Relevance of Curriculum
     - Behavioral Concerns
     - Apathy
     - Organization and Study Skills
     - Lack of the BIG PICTURE

3. **The Journey Begins**
   - The Scouts were sent
     - Conferences
       - MATC
       - UWM
       - Madison

- School Visits
    - Delavan Darian
    - Waukegan
- Workshops
    - Madison
    - CESA 1
- In-Service
    - In house (Integrated Curriculum, Assessment,Technology)
- Graduate Classes
    - Systems Theory, Quality Schools

4. Dawn of a Vision

- Tech Prep Committee
    - The prophet (MONICA)
    - Staff
    - D.I

- Administrative Guidance
    - Support
    - Shielding
    - Politics
    - Funding

5. The Waters Are Tested

A team was created

There was a meeting
- Sharing of ideas
- Search for congruence
- Brainstorming a plan
- Blind test - Forced creation

6. The Evolution continues

Dialogue resumes
Perkins Funding
Central office support
Department Chair approval

7. Conception

-STOUT-
Excitement of Creation
The guidelines were formed
The maps were drawn
Gel time

8. The Message was Shared

Support was gleaned
Ya...But....
What....If
Control Enthusiasm

9. The Waters Calm

Discussions focus

Roles fuse

- Guidance
- Administrator

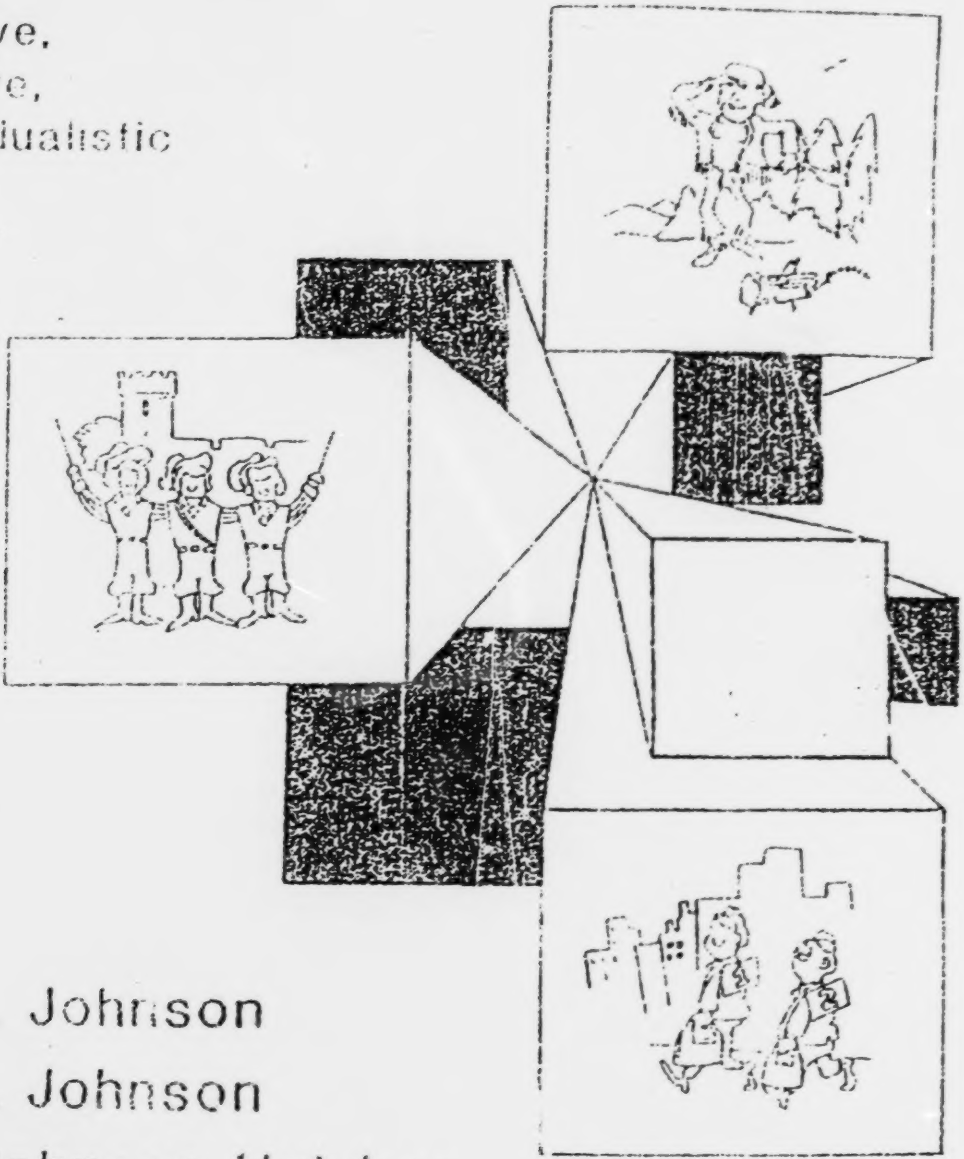
Meetings generate action

- Schedules
- Curriculum
- Rules/Regulations
- Summer Schedule
- Stout Follow-up

10. And It Is Good

Learning Together and Alone

Cooperative, Competitive, and Individualistic Learning



David W. Johnson
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DEFINITIONS

• COOPERATION:	*We sink or swim together.* I can attain my goal only if you attain your goal; there is a positive correlation among goal attainments.
Conditions:	- small, often heterogeneous groups - other students as a major resource - teacher acts as a consultant - positive interdependence between group members - individual accountability--all members know the material - evaluate by comparison to a preset criterion
• INDIVIDUALIZATION:	*We are each in this alone.* My achieving my goal is unrelated to your achieving your goal; there is no correlation among goal attainments.
Conditions:	- separate working area - separate work materials - teacher is the primary source - self-paced - evaluate by a preset criterion
• COMPETITION:	*I swim, you sink; I sink, you swim.* If I obtain my goal, you cannot obtain your goal and vice versa; there is a negative correlation among goal attainments.
Conditions:	- small, homogeneous groups - maximize the number of winners - compete against people at the same ability level - not a "life or death" situation, but for fun and review, and a change of pace - evaluate by comparison to other's work

---

* Taken from: Learning Together and Alone, D. W. Johnson and R. T. Johnson. Englewood Cliffs, NJ: Prentice-Hall. Second Edition, 1987.

Basic Elements Of Cooperative Learning

Positive Interdependence

Students must feel that they need each other in order to complete the group's task - that they "sink or swim" together. Some ways to create this feeling are through establishing mutual goals (students must learn the material and make certain group members learn the material), joint rewards (if all group members achieve above a certain percentage on the test, each will receive bonus points), shared materials and information (one paper for each group or each member receives only part of the information needed to do the assignment), and assigned roles (summarizer, encourager of participation, elaborator).

Face-To-Face Interaction

No magic exists in positive interdependence in and of itself. Beneficial educational outcomes are due to the interaction patterns and verbal exchanges that take place among students in carefully structured cooperative learning groups. Oral summarizing, giving and receiving explanations, and elaborating (relating what is being learned to previous learning) are important types of verbal interchanges.

Individual Accountability

Cooperative learning groups are not successful until every member has learned the material or has helped with and understood the assignment. Thus, it is important to frequently stress and assess individual learning so that group members can appropriately support and help each other. Some ways of structuring individual accountability are by giving each group member an individual exam or by randomly selecting one member to give an answer for the entire group.

Interpersonal And Small Group Skills

Students do not come to school with the social skills they need to collaborate effectively with others. So teachers need to teach the appropriate communication, leadership, trust, decision making, and conflict management skills to students and provide the motivation to use these skills in order for groups to function effectively.

Group Processing

Processing means giving students the time and procedures to analyze how well their groups are functioning and how well they are using the necessary social skills. This processing helps all group members achieve while maintaining effective working relationships among members. Feedback from the teach and/or student observers on how well they observed the groups working may help processing effectiveness.

Taken from: Circles of Learning: Cooperation in the Classroom (Revised Edition. D. W. Johnson, R. T. Johnson and Edythe Johnson Holubec. Englewood Cliffs, NJ: Prentice-Hall, 1986.

THE TEACHER'S ROLE IN COOPERATION

Make Decisions

Specify Academic and Collaborative Objectives. *What academic and/or collaborative skills do you want students to learn or practice in their groups? Start with something easy.*

Decide on Group Size. *Students often lack collaborative skills, so start with groups of two or three students; later advance cautiously to fours.*

Assign Students to Groups. *Heterogeneous groups are the most powerful, so mix abilities, sexes, cultural backgrounds, and task orientations. Assign students to groups randomly or select groups yourself.*

Arrange the Room. *The closer the students are to each other, the better they can communicate. Group members should be "knee to knee and eye to eye."*

Plan Materials. *Materials can send a "sink or swim together" message to students if you give only one paper to the group or give each member part of the material to learn and then teach the group.*

Assign Roles. *Students are more likely to work together if each one has a job which contributes to the task. You can assign work roles such as Reader, Recorder, Calculator, Checker, Reporter, and Materials Handler or skill roles such as Encourager of Participation, Praiser, and Checker for Understanding.*

Set the Lesson

Explain the Academic Task. *Prepare students by teaching them any material they need to know, then make certain they clearly understand what they are to do in the groups. This might include explaining lesson objectives, defining concepts, explaining procedures, giving examples, and asking questions.*

Structure Positive Interdependence. *Students must feel that they need each other to complete the group's task, that they "sink or swim together." Some ways to create this are by establishing mutual goals (students must learn the material and make certain group members learn the material), joint rewards (if all group members achieve above a certain percentage on the test, each will receive bonus points), shared materials and information, and assigned roles*

Structure Individual Accountability. *Each student must feel responsible for learning the material and helping the group. Some ways to ensure this feeling include frequent oral quizzing of group members picked at random, giving individual tests, having everyone in the group write (pick one paper at random to grade, or having students do work first to bring to the group.*

Structure Intergroup Cooperation. *Having groups check with and help other groups and giving rewards or praise when all class members do well can extend the benefits of cooperation to the whole class.*

Explain the Criteria for Success. *Student work should be evaluated on a criteria-referenced rather than a norm-referenced basis. Make clear your criteria for evaluating the groups' work.*

The Teacher's Role in Cooperation

Specify Expected Behaviors. The more specific you are about the behaviors you want to see in the groups, the more likely students will do them. Make it clear that you expect to see everyone contributing, helping, listening with care to others, encouraging others to participate, and asking for help or clarification. younger students may need to be told to stay with their group, take turns, share, ask group members questions, and use quiet voices.

•Teach Collaborative Skills. After students are used to working in groups, pick one collaborative skill they need to learn, point out the need for it, define it carefully, have students give you phrases they can say when using the skill, post the phrases (praise, bonus points, stars), and observe for and encourage the use of the skill until students are doing it automatically. Then teach a second skill. Consider praising, summarizing, encouraging, checking for understanding, asking for help, or generating further answers.

Monitor and Intervene

•Arrange Face-to-Face Interaction. The beneficial educational outcomes of cooperative learning groups are due to the interaction patterns and verbal exchange that takes place among students. Make certain there is oral summarizing, giving and receiving explanations, and elaborating going on.

Monitor Students' Behavior. This is the fun part! While students are working, you circulate to see whether they understand the assignment and the material, give immediate feedback and reinforcement, and praise good use of group skills.

Provide Task Assistance. If students are having trouble with the task, you can clarify, reteach, or elaborate on what they need to know.

Intervene to Teach Collaborative Skills. If students are having trouble with group interactions, you can suggest more effective procedures for working together or more effective behaviors for them to engage in. You can ask students to figure out how to work more effectively together. If students are learning or practicing a skill, record on an observation sheet how often you hear that skill, then share your observations with the groups.

Evaluate and Process

Evaluate Student Learning. Assess how well students completed the task and give them feedback on how well they did.

•Process Group Functioning. In order to improve, students need time and procedures for analyzing how well their group is functioning and how well they are using collaborative skills. Processing can be done by individuals, small groups, or the whole class. To start, have groups routinely list three things they did well in working together today and one thing they will do better tomorrow. Then summarize as a whole class.

Provide Closure. To reinforce student learning you may wish to have groups share answers or paper, summarize major points in the lesson, or review important facts.

•Essential Elements of Cooperative Learning Groups

Cooperative Learning Center, David Johnson & Roger Johnson, University of Minnesota,
Minneapolis, MN 55455

SOME LEARNING OUTCOMES PROMOTED BY COOPERATIVE LEARNING

1. Higher achievement and increased retention.

2. Greater use of higher level reasoning strategies and increased critical reasoning competencies.

3. Greater ability to view situations from others' perspectives.

4. Higher achievement and greater intrinsic motivation.

5. More positive, accepting, and supportive relationships with peers regardless of ethnic, sex, ability, social class differences or handicapping conditions.

6. More positive attitudes toward teachers, principals, and other school personnel.

7. More positive attitudes toward subject areas, learning and schools.

8. Higher self-esteem based on basic self-acceptance.

9. Greater social support.

10. More positive psychological adjustment and health.

11. Less disruptive and more on-task behavior.

12. Greater collaborative skills and attitudes necessary for working effectively with others.,

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What Are The Benefits?

Substantial research supports that students achieve at higher levels in cooperative learning situations and that they retain the information longer. This increased achievement and retention is true for all ability levels: low, middle, and high. Talking about their school work rather than quietly completing worksheets gives students an opportunity to increase time on task, to be more actively involved, and to be more responsible for their own learning. Cooperative learning has also been shown to facilitate:

- mastery of concepts and principles
- application of information to other settings
- problem-solving skills
- creativity
- verbal skills
- ability to take another person's perspective

Other Benefits

Research on cooperative learning has also shown that students feel better about themselves, schools and others. Students in the cooperative classroom develop higher levels of self-esteem and feel more cared about. School becomes a place where people care about learning and each other.

Social Skill Competencies

Cooperative learning groups give students an opportunity to learn how to work with others. A major component of cooperative learning is teaching students effective social skill behaviors. The four major social skill areas taught are:

TRUST:	The ability to share ideas and feelings and the ability to accept and support others.
COMMUNICATION:	The ability to send and receive messages clearly and effectively.
LEADERSHIP:	The ability to complete a task and to maintain in effective group relationships.
CONFLICT RESOLUTION:	The ability to resolve interpersonal and conceptual conflicts.

These social skill behaviors are also necessary for building and maintaining a stable family, a successful career, and long-term friendships.

CONTROVERSY

Controversy exists when one person's ideas, information, conclusions, theories, or opinions are incompatible with those of another and the two then seek to reach an agreement.

Promoting Constructive Controversy

1. Structure cooperative goal of making the most effective decision possible ("We sink or swim together.")
2. Ensure heterogeneous representation within group.
3. Promote controversy by:
    a. Presenting contrasting viewpoints.
    b. Highlighting disagreements among group members and promoting several cycles of differentiation and integration.
    c. Being a rational and impartial leader.
    d. Requiring every group member to be a critical evaluator.
    e. Assigning devil's advocate role to one or more members.
    f. Using independent subgroups.
    g. Using advocacy subgroups.
    h. Having "second chance" meetings.
    i. Bringing in an outsider devil's advocate.
4. Cue, reinforce, and teach the relevant social skills.
5. Emphasize rational and spirited argumentation.

Necessary Skills

1. Define decision as a mutual problem, not as a win-lose situation.
2. Be critical of ideas, not people (confirm others' competence while disagreeing with their positions).
3. Separate one's personal worth from others' reactions to one's ideas.
4. Differentiate before trying to integrate.
5. Take the others' perspectives before refuting their ideas.
6. Give everyone a fair hearing
7. Follow the canons of rational argument.

- - - - - - - - - -

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Name ______________________

PEER EVALUATION

Each area is worth 3 points

______ 1. Is the individual cooperative?

______ 2. Does the individual take initiative?

______ 3. Is this person open-minded and accepting of other's ideas and opinions?

______ 4. Does the individual contribute a fair share to the success of the group?

______ 5. Do you feel the person acts in a professional manner, becoming of a future helping professional?

______ 6. The success of the project depends on the individual contributions. Does this person keep the goals and objectives of the group in mind?

______ 7. Did the group member complete their designated tasks in a timely fashion?

______ 8. Were materials submitted by the individual accurate and composed well?

______ 9. Was the individual in attendance and punctual for group meetings?

______ 10. Pleases rate this person's ability to function as an effective group member.

______ Total Points (30)

Please make comments here:

PeerEval.IS

Johnson & Johnson

Basic Elements Of Cooperative Learning

Positive Interdependence

Students must feel that they need each other in order to complete the group's task, that they "sink or swim" together. Some ways to create this feeling are through establishing mutual goals (students must learn the material and make certain group members learn the material), joint rewards (if all group members achieve above a certain percentage on the test, each will receive bonus points), shared materials and information (one paper for each group or each member receives only part of the information needed to do the assignment), and assigned roles (summarizer, encourager of participation, elaborator).

Face-To-Face Interaction

No magic exists in positive interdependence in and of itself. Beneficial educational outcomes are due to the interaction patterns and verbal exchanges that take place among students in carefully structured cooperative learning groups. Oral summarizing, giving and receiving explanations, and elaborating (relating what is being learned to previous learning) are important types of verbal interchanges.

Individual Accountability

Cooperative learning groups are not successful until every member has learned the material or has helped with and understood the assignment. Thus, it is important to frequently stress and assess individual learning so that group members can appropriately support and help each other. Some ways of structuring individual accountaibility are by giving each group member an individual exam or by randomly selecting one member to give an answer for the entire group.

Interpersonal And Small Group Skills

Students do not come to school with the social skills they need to collaborate effectively with others. So teachers need to teach the appropriate communication, leadership, trust, decision making, and conflict management skills to students and provide the motivation to use these skills in order for groups to function effectively.

Group Processing

Processing means giving students the time and procedures to analyze how well their groups are functioning and how well they are using the necessary social skills. This processing helps all group members achieve while maintaining effective working relationships among members. Feedback from the teacher and/or student observers on how well they observed the groups working may help processing effectiveness.

Taken from: Circles of Learning: Cooperation in the Classroom (Revised Edition). D. W. Johnson, R. T. Johnson and Edythe Johnson Holubec. Englewood Cliffs, NJ: Prentice-Hall, 1986.

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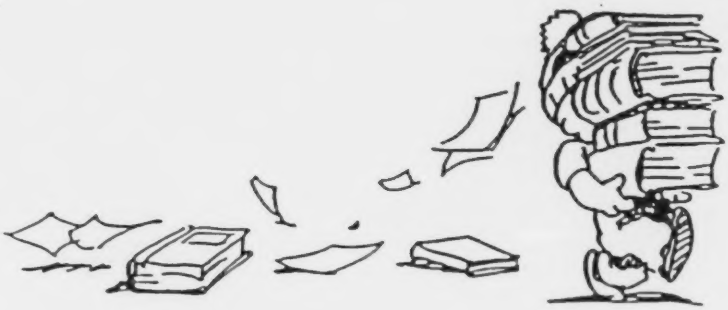

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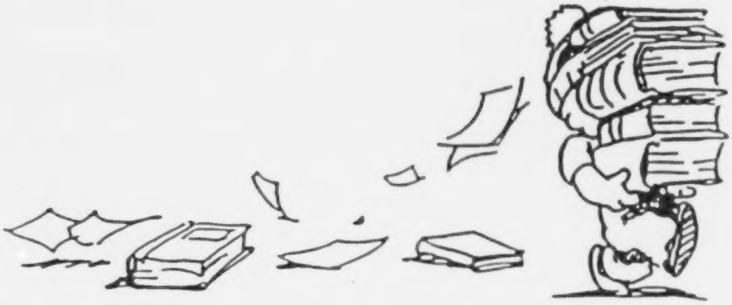

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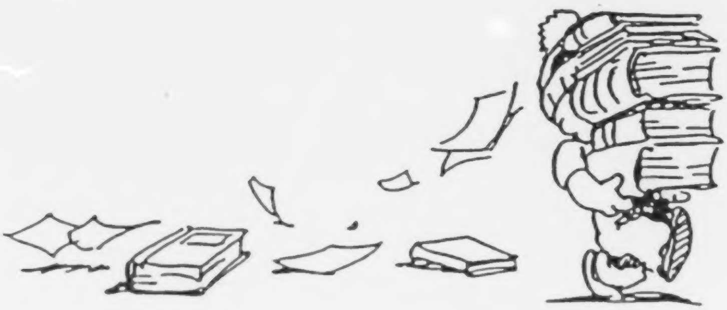

A BRIEF SELF-TEST FOR ESTIMATING PSYCHOLOGICAL TYPE

Circle the word in each pair that most appeals to you or seems most characteristic of you. In some cases both words may appeal to you or seem characteristic of you; in others, neither word may be very appealing. Nonetheless, please try to indicate the one word in each pair you prefer. Please work across the page and answer as quickly as possible. Your first impression is likely to be the most accurate indicator.

loud - quiet
active - reflective
gregarious - private
outgoing - reserved
sociable - detached
external - internal
do - think
speak - write
talk - read

realistic - intuitive
blueprint - dream
details - pattern
sensible - imaginative
practical - creative
present - future
factual - symbolic
specific - general
formula - hunch

convincing - touching
objective - subjective
head - heart
just - humane
principle - passion
fair - tender
clarity - harmony
reason - emotion
professional - warm

systematic - flexible
methodical - curious
organized - spontaneous
deliberate - improvising
exacting - impulsive
definite - tolerant
decisive - open-minded
plan - adapt
control - freedom

Now count the number you circled in each of the eight vertical columns.

Sum E: _____
Sum I: _____

Sum S: _____
Sum N: _____

Sum T: _____
Sum F: _____

Sum J: _____
Sum P: _____

The difference in the two sums shows the strength of your preference.

Choose the letter corresponding to the larger in each pair above and write them in the space below.

_______ E or I

_______ S or N

_______ T or F

_______ J or P

Characteristics Frequently Associated with Each Type

	Sensing Types		Intuitive Types	
Introverts	**ISTJ** Serious, quiet, earn success by concentration and thoroughness. Practical, orderly, matter-of-fact, logical, realistic, and dependable. See to it that everything is well organized. Take responsibility. Make up their own minds as to what should be accomplished and work toward it steadily, regardless of protests or distractions.	**ISFJ** Quiet, friendly, responsible, and conscientious. Work devotedly to meet their obligations. Lend stability to any project or group. Thorough, painstaking, accurate. Their interests are usually not technical. Can be patient with necessary details. Loyal, considerate, perceptive, concerned with how other people feel.	**INFJ** Succeed by perseverance, originality, and desire to do whatever is needed or wanted. Put their best efforts into their work. Quietly forceful, conscientious, concerned for others. Respected for their firm principles. Likely to be honored and followed for their clear convictions as to how best to serve the common good.	**INTJ** Usually have original minds and great drive for their own ideas and purposes. In fields that appeal to them, they have a fine power to organize a job and carry it through with or without help. Skeptical, critical, independent, determined, sometimes stubborn. Must learn to yield less important points in order to win the most important.
	ISTP Cool onlookers — quiet, reserved, observing and analyzing life with detached curiosity and unexpected flashes of original humor. Usually interested in cause and effect, how and why mechanical things work, and in organizing facts using logical principles.	**ISFP** Retiring, quietly friendly, sensitive, kind, modest about their abilities. Shun disagreements, do not force their opinions or values on others. Usually do not care to lead but are often loyal followers. Often relaxed about getting things done, because they enjoy the present moment and do not want to spoil it by undue haste or exertion.	**INFP** Full of enthusiasms and loyalties, but seldom talk of these until they know you well. Care about learning, ideas, language, and independent projects of their own. Tend to undertake too much, then somehow get it done. Friendly, but often too absorbed in what they are doing to be sociable. Little concerned with possessions or physical surroundings.	**INTP** Quiet and reserved. Especially enjoy theoretical or scientific pursuits. Like solving problems with logic and analysis. Usually interested mainly in ideas, with little liking for parties or small talk. Tend to have sharply defined interests. Need careers where some strong interest can be used and useful.
Extraverts	**ESTP** Good at on-the-spot problem solving. Do not worry, enjoy whatever comes along. Tend to like mechanical things and sports, with friends on the side. Adaptable, tolerant, generally conservative in values. Dislike long explanations. Are best with real things that can be worked, handled, taken apart or put together.	**ESFP** Outgoing, easygoing, accepting, friendly, enjoy everything and make things more fun for others by their enjoyment. Like sports and making things happen. Know what's going on and join in eagerly. Find remembering facts easier than mastering theories. Are best in situations that need sound common sense and practical ability with people as well as with things.	**ENFP** Warmly enthusiastic, high-spirited, ingenious, imaginative. Able to do almost anything that interests them. Quick with a solution for any difficulty and ready to help anyone with a problem. Often rely on their ability to improvise instead of preparing in advance. Can usually find compelling reasons for whatever they want.	**ENTP** Quick, ingenious, good at many things. Stimulating company, alert and outspoken. May argue for fun on either side of a question. Resourceful in solving new and challenging problems, but may neglect routine assignments. Apt to turn to one new interest after another. Skillful in finding logical reasons for what they want.
	ESTJ Practical, realistic, matter-of-fact, with a natural head for business or mechanics. Not interested in subjects they see no use for, but can apply themselves when necessary. Like to organize and run activities. May make good administrators, especially if they remember to consider others' feelings and points of view.	**ESFJ** Warm-hearted, talkative, popular, conscientious, born cooperators, active committee members. Need harmony and may be good at creating it. Always doing something nice for someone. Work best with encouragement and praise. Main interest is in things that directly and visibly affect people's lives.	**ENFJ** Responsive and responsible. Generally feel real concern for what others think or want, and try to handle things with due regard for the other person's feelings. Can present a proposal or lead a group discussion with ease and tact. Sociable, popular, sympathetic. Responsive to praise and criticism.	**ENTJ** Hearty, frank, decisive, leaders in activities. Usually good in anything that requires reasoning and intelligent talk, such as public speaking. Are usually well informed and enjoy adding to their fund of knowledge. May sometimes appear more positive and confident than their experience in an area warrants.

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LEADERSHIP STRENGTHS AND WEAKNESSES OF THE SIXTEEN MBTI TYPES

There are sixteen Myers-Briggs types. Each is unique and in at least one way different from all the other types. Each type has characteristic leadership strengths as well as potential weaknesses. Here's a thumbnail sketch of each type. We include for each type a speculation about a leader who may represent that type based on the insights of MBTI expert Otto Kroeger.

ISTJ: Strengths: Dependability, thoroughness, perseverance
Possible Weaknesses: Obsessiveness and driveness
Example: Henry Ford

ISFJ: Strengths: Sense of duty, loyalty, and commitment to established procedures
Possible Weaknesses: Discomfort with authority over others; may harbor feelings of resentment toward others, may turn mere procedures into cosmic laws
Example: Nancy Reagan

INFJ: Strengths: Quiet strength, helpfulness, empathy toward others, psychological complexity
Possible Weaknesses: Hard to get to know, easily hurt
Example: Thomas Jefferson

INTJ: Strengths: Self-aware, independent, experimental, theoretical, hard working, sees "big picture", wants to make improvements everywhere
Possible Weaknesses: Demanding and interpersonally distant
Example: Richard Nixon, Thomas Edison

ISTP: Strengths: Fearless, thrives on excitement, skilled with hands, quietly observant
Possible Weaknesses: Impulsive, insubordinate, aloof, and weaker verbal skills
Example: Chuck Yeager

ISFP: Strengths: Sympathetic and serene, may be artistically gifted
Possible Weaknesses: Verbally weak, psychologically misunderstood by others, can't appreciate the need for rules and limits, low need to lead or control others
Example: St. Francis of Assissi

INFP: Strengths: Idealistic, calm, easy-going but reserved
Possible Weaknesses: Self-criticism and self-doubt
Example: Abraham Lincoln

INTP: Strengths: Objectivity and intellectual precision
Possible Weaknesses: Absent-mindedness and insensitivity to others
Example: Albert Einstein (who was not insensitive!)

ESTP: Strengths: Realistic, skilled negotiator, entrepreneur, fun to be around, great "promoter", loves action, excitement and "brinksmanship", flexibility
Possible Weaknesses: Short attention span, may avoid planning, tendency to dismiss ideas that aren't immediately useful, oblivious to established norms and authority
Example: George Patton, Lee Iacocca

ESFP: Strengths: Warmth, optimism, sociability, generosity, craves the limelight, action, and variety
Possible Weaknesses: Low tolerance for anxiety so may avoid unpleasantness, low tolerance for routine procedures, may start more than they finish
Example: Gracie Allen (of the Burns and Allen comedy team)

ENFP: Strengths: Gregarious, enthusiastic, great improvisor, charming, at ease with others, dynamic
Possible Weaknesses: Resists evaluating others, may try too hard to please others
Example: Will Rogers (who "never met a person I didn't like")

ENTP: Strengths: Enthusiastic, diverse interests, individualistic, inventive, innovative, great conversationalist, adaptable, entrepreneurial
Possible Weaknesses: Dependability, risk taking, poor at follow-through on projects
Example: W. C. Durant (founder of General Motors)

ESTJ: Strengths: Gregarious, practical, loyal, administrative skill, decisive
Possible Weaknesses: Jumping to conclusions
Example: Harry Truman

ESFJ: Strengths: Extremely sociable, group harmonizer, serves others
Possible Weaknesses: May sweep problems under rug
Example: Dwight David Eisenhower

ENFJ: Strengths: Charismatic, empathy, skilled in "reading" others' motives or intent, natural and well-liked leader
Possible Weaknesses: May feel responsible for others' feelings
Example: Ronald Reagan, Martin Luther King, Jr.

ENTJ: Strengths: Dominant, energetic, great communicator, vision, executive skill
Possible Weaknesses: Arrogance, impatience, tolerance of others
Example: General Douglas MacArthur

Sources: Kroeger, O. and Thuesen, J. M. Type Talk.
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Decision-Making Style Questionnaire

Mark each of your responses on the following scales. Then use the point value column to arrive at your score. For example, if you answered *a* to the first question, you would check *1a* in the feeling column.

This response receives zero points when you add up the point value column. Instructions for classifying your scores are indicated below the scales.

Sensation	Point Value	Intuition	Point Value	Thinking	Point Value	Feeling	Point Value
2 b ___	1	2 a ___	2	1 b ___	1	1 a ___	0
4 a ___	1	4 b ___	1	3 b ___	2	3 a ___	1
5 a ___	1	5 b ___	1	7 b ___	1	7 a ___	1
6 b ___	1	6 a ___	0	8 a ___	0	8 b ___	1
9 b ___	2	9 a ___	2	10 b ___	2	10 a ___	1
12 a ___	1	12 b ___	0	11 a ___	2	11 b ___	1
15 a ___	1	15 b ___	1	13 b ___	1	13 a ___	1
16 b ___	2	16 a ___	0	14 b ___	0	14 a ___	1
Maximum Point Value	(10)		(7)		(9)		(7)

Write *intuition* if your intuition score is equal to or greater than your sensation score. Write *sensation* if your sensation score is greater than your intuition score. Write *feeling* if your feeling score is greater than your thinking score. Write *thinking* if your thinking score is greater than your feeling score.

A high score on *intuition* indicates you see the world in holistic terms. You tend to be creative. A high score on *sensation* indicates that you are realistic and see the world in terms of facts. A high score on *feeling* means you make decisions based on gut feeling. A high score on *thinking* indicates a highly logical and analytical approach to decision making.

Decision–Making Style Questionnaire

Part I

Circle the response that comes closest to how you usually feel or act. There are no right or wrong responses to any of these items.

1. I am more careful about
   a. people's feelings
   b. their rights
2. I usually get on better with
   a. imaginative people
   b. realistic people
3. It is a higher compliment to be called
   a. a person of real feeling
   b. a consistently reasonable person
4. In doing something with other people, it appeals more to me
   a. to do it in the accepted way
   b. to invent a way of my own

5. I get more annoyed at
   a. fancy theories
   b. people who do not like theories
6. It is higher praise to call someone
   a. a person of vision
   b. a person of common sense
7. I more often let
   a. my heart rule my head
   b. my head rule my heart
8. I think it is a worse fault
   a. to show too much warmth
   b. to be unsympathetic
9. If I were a teacher, I would rather teach
   a. courses involving theory
   b. fact courses

Part II

Which word in the following pairs appeals to you more? Circle *a* or *b*.

10. a. Compassion
    b. Foresight
11. a. Justice
    b. Mercy
12. a. Production
    b. Design
13. a. Gentle
    b. Firm
14. a. Uncritical
    b. Critical
15. a. Literal
    b. Figurative
16. a. Imaginative
    b. Matter-of-fact

MBTI STRATEGIES FOR WINNING THE SUPPORT FOR CHANGE

NFs - Given that NFs need recognition of their individuality, and their personal worth, and given that they are dedicated to democratic processes, involving NFs in decision (as in participative management) is likely to elicit their support. If a wanted change can be described in terms of human values, of better meeting the individual needs of employees and clients, then NFs are likely to see such change as desirable. They need an abundant opportunity to discuss possible change long before it is to be implemented. Change for NFs should never be sudden, but be implemented slowly. The time-honored management rule of "no surprises" applies in full force to the NFs.

SJs - Strategies for winning SJ support for change need to give consideration to the SJ's need to be responsible and to serve, to uphold tradition, and to deal with the status quo. Providing SJ with FACTS to support a desired change may help to engage their cooperation. Furthermore, if the desired change can be described in terms of a more efficient way of getting things done, in terms of a better procedure, the SJs will be likely to react positively in the degree the change makes sense to them. In contrast with the NFs, who need verbal discussion, the SJs need to have written documents describing the change. In fact, they tend to become rather impatient with discussions, particularly repetitive or lengthy discussions. If the SJs can be involved in writing a procedural manual involved in the change, they are apt to be delighted and are also apt to produce a thorough and sensible document.

NTs - NTs are logical and seldom are resistant to change. Strategies for winning NT support for change require a recognition of the NT's need for competency and to be seen as competent. Their support can best be engaged through appeal to their intellect. One way to effect this is to give the NT's opportunity to design the model for change. Changes in which the NT has had a hand in devising are heartily endorsed by the devisor.

SPs - SPs tend to ignore the rules of any system they are in, preferring to march to their own drums as independent free spirits. They seldom seem involved with institutional concerns and are, therefore , rarely influential either as a positive or as a negative force for change. Only when a crisis occurs do the SPs mobilize for action and thus their involvement with change must, by definition, be unplanned. There can be no strategies for winning SP support for PLANNED change; they can be counted on to lend excitement to unplanned change and are very likely to be unilaterally involved in pursuing their own impulses to change.

From PLEASE UNDERSTAND ME, by David Keirsey

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LEADING IN STYLE: Catalyst

NF leaders include the ENFJ who is the natural leader of this type, and the ENFP, INFP, and INFJ who will have to work a little harder at their leadership. Their primary hunger is for a search for self, for identity, for meaning and authenticity. They are marked by idealism and charisma, are superbly empathic, and have a flair for dramatizing the mundane events of living into something special.

Managerial Strengths: The management style of Catalyst leaders is marked by personal charisma and commitment to the people they lead. They usually have a tongue of silver and through talk communicate their caring and enthusiasm. They are unusually gifted at seeing the possibilities of both the institution and the people with whom they work, focusing intuitively on their strengths. They excel in working with and through people and, as heads of a democratically-run organization, allow the contributions of all members of that organization to surface. They usually are comfortable in unstructured meetings for both directive and participative decision making purposes. More often than not, they are accurate about the organizational climate. They tend to be patient with complicated situations and can wait for the right time to move forward. Catalysts can be extraordinary as heads of organizations, the visible leaders who speak well for the organization itself and for the people in it. They often have an unusual store of energies, although these seem to come in bursts powered by a new enthusiasm. Yesterday's projects, at that point, may not receive needed attention.

NF leaders have, when they are at their best, the talent, more than any other type, for seeing how a liability can be turned into an asset, particularly when dealing with people problems. They forget very easily yesterday's negative, disagreeable events and tend to remember well the agreeable, tending to be a romantic about both the future and the past--always the optimist in their public presentation of self. Generally they hide their pessimistic moments, wanting to spare others any discomfort that might arise from these "down" times.

Catalyst managers tend to be the best and most abundant giver of appreciation. They use enthusiasm, listening, and approval as they work with people. Because they give so much, they themselves need replenishment, through having others give to them, in turn, expressions of enthusiasm, listening, and approval. If they receive this support they can continue contributing at a very high degree of productivity. If they do not, if they are met with continual disapproval, they can become discouraged and may look outside the organization for this kind of recognition. They value words of appreciation from their colleagues, their superiors, and their subordinates and can appreciate the intentions of the giver even when the approval is oblique. Catalyst managers tend to be motivated by positive comments rather than negative ones and tend to see the positive in others and events.

Possible Weaknesses as Managers: NF leaders may find that SOPs (Standard Operating Procedures) eat up much of their time because they are so responsive to interpersonal transactions--and, indeed, seek them out. Catalysts tend to be very generous with their time, even to the point of neglecting their obligations outside the organization and neglecting necessary recreational time. They sorely need to schedule renewal time for themselves if they are not to have their energies drained to the point where they are unproductive and immobilized.

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LEADING IN STYLE: Visionary

NT leaders include the ENTJ who is the natural leader of this type, and the ENTP, INTP, and INTJ who have to work a little harder at their leadership. Their primary hunger is for competency and knowledge—to see themselves as competent and knowledgeable and for others to see them as having these capabilities.

Managerial Strengths: Visionary/Architect/Builder leaders are architects of progress and ideas. They are interested in the principles on which the organization is built or is to be built. They seek answers to the "whys?" of events and seek to discern laws and principles. They are able to see relationships among components of an organizational system and between one system and another. Characteristically they are able to see how the needs of the immediate system they serve interlocks with other systems within the total structure. They see the interworkings of the system itself and the long and short range implications of events which occur and behaviors which people display.

The focus of NT managers is on possibilities, but they approach possibilities with impersonal analysis. For example, when they move into an organization, they are likely to analyze immediately the power base and power structure from an impersonal point of view. NT managers are intellectually ingenious and excellent pioneers in technical or administrative areas. They usually are highly creative in the area of model building.

Possible Weaknesses as Managers: When Visionary managers are involved in the creative process, they have enormous drive, but once the "castle" is designed, they are more than willing to allow someone else to take over to deal with routine details and, as a result, may find that their designs and plans were not carried out to their satisfaction. They seldom blame others for this failure—only themselves—but they will tend to repeat the premature loss of interest in the next situation. This is particularly true with NTPs. NTJs are apt to do the same thing but usually at a later stage.

Because the focus of Visionary leaders is on principles and on thinking, they may, at times, not be aware of the feelings of others, and be equally oblivious to their hurts and joys. People, therefore, find them cold and distant and may not feel comfortable in commenting on the homely events in their lives and thus NT managers can become isolated from the stream of living which goes beyond business in the lives of people within the organization. As a result, NT managers often find themselves at loss for "small talk" in social or semi-social situations.

NT managers are apt to be intellectually oriented and may unknowingly communicate an attitude on their part that they do not value subordinates (or superiors) who lack intellectual competence. They may find themselves in difficulty in their interpersonal transactions because of their projections onto others that they (also) should be thoroughly competent, adequate, and achieving in all possible respects.

Visionary leaders expect a great deal from themselves and others, often more than can be delivered, and they might do well to remind themselves that people with great strenghts also have great weaknesses. Because NT leaders tend to escalate standards for themselves and others, they typically feel restless and unfulfilled.

This restlessness sometimes takes the form of verbalized impatience by NT managers of snags or errors, and at times, an impatience with finding it necessary to cover ground already discussed.

Characteristic Ways of Dealing With Colleagues: NT managers typically track the thought processes and ideas of others rather easily and enjoy doing so. They are responsive to the new ideas of colleagues as well as enthusiastic about their own. They enjoy solving problems and, when faced with a colleague's problem, will be stimulated rather than weighed down by the prospect of solving it. They have the courage of their convictions and are willing to stand alone against the crowd if they believe that they are right.

Visionary/Architect/Builder managers like to make decisions, particularly the NTJs, and colleagues will know where Visionary leaders stand on issues--but only if they ask! NTs believe that their position is quite obvious and therefore it would be redundant to verbalize it, but they can be counted on to be frank if their opinion is solicited. When others speak for them concerning their position, they can become inwardly highly annoyed, although they do not always allow this reaction to show. And, as often as not, when others do speak for their position, they are wrong.

NT managers may, at times, be too nonconforming and ahead of the "crowd" to have public acceptance or a devoted, dedicated following. They tend to be on the growing edge of change and seldom look back over their shoulder to check if others are close behind--or there at all! Their "self-power awareness" causes them to be non-competitive. Seldom do NTs believe that they must get ahead at the expense of others. Seldom do they demonstrate a need to minimize the contributions of colleagues.

Visionary managers are excellent decision makers and can be counted on to remember and to honor decisions, even when under great pressure. In an organization, Visionaries are the "portrait painters of ideas." Because they can so easily conceptualize the outcomes staff members suggest as their contributions, they are comfortable in management systems that focus on results rather than on procedures.

NTs, either as managers or as "producers" may quickly leave an organization (either physically or psychologically) if their talents are not used.

Contributions in a Management Team: If an organization does not have a Visionary/Architect/Builder on the management team, planned change may be minimal and sooner, if not later, deterioration will occur. The status quo will continue, perhaps, to obsolescence. NT managers can contribute theoretical structure and develop useable alternatives for actions being considered. And the structures the NTs develop are apt to take into consideration the benefits for the entire system as well as the immediate system being developed. NTs contribute a belief and enthusiasm in possibilities of ideas which are often contagious to others. They can be as supportive and enthusiastic about the ideas of another as their own and ordinarily are as good at following as leading, being able to do either as the circumstances demand. An NT team member may want to spend too much time planning and delay the execution but an SP team member can provide for this stimulus.

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LEADING IN STYLE: Troubleshooter/Negotiator

SP leaders include the ESTP which is the natural leader of this type, and the ESFP, ISFP, and ISTPs who will have to work a little harder at their leadership. Their primary hunger is for freedom, spontaneity, and action. They need to feel free to respond to impulse and need to believe that others see them as free to act when and how they wish.

Managerial Strengths: Troubleshooter/negotiator managers are practical pragmatists who can deal with concrete problems in a methodical fashion. They can analyze a system and see how it works, can find where breakdowns and errors occur, and can figure out the corrections needed very rapidly. Under an SP leader, change will be easy for they can adapt easily to new situations. They welcome and seek change.

As leaders, more than any other, this type will know what is going on in an organization, for they have acute powers of observation regarding the environment. Under their leadership things happen, apparently effortlessly, with an economy of motion on their part. SP leaders do not fight the "system" but use what is there and available to solve problem situations. They do not use their energies needlessly in worrying about changing the reality of what cannot be changed. Things that can be changed--personnel, procedures, policies--are all negotiable in the crisis.

Possible Weaknesses as Managers: SP leaders might be reluctant to accept new theory and may be impatient with abstractions. They do not like the unfamiliar theory and may be impatient with abstractions. They do not like the unfamiliar and may react negatively to extreme change. They live so fully in the immediate moment that they may have difficulty remembering commitments and decisions of the past. Yesterday is quickly gone and just as fast forgotten. Current demands preempt anything else. This belief leaves SP leaders in a position of being somewhat unpredictable to colleagues and subordinates. When there is nothing to troubleshoot, Troubleshooter/negotiator leaders can become rigid.

Characteristic Ways of Dealing with Colleagues: SP managers respond to the ideas of others if they are specific. They are flexible, patient, open-minded and adaptable in working with others who generally find an SP leader easy to get along with. They are not threatened by the possibility of failure in themselves or others, so will take risks and encourage others to do the same. They change their position easily as new facts and new situations arise--seldom finding this shift in position a threat to their ego. They are willing to take orders from superiors and will not fight those above them although they may not always carry out directions as they had said that they would. SP leaders are matter-of-fact about things as they are and do not chafe about what might have been. They are non-judgmental of their fellow workers and accept their behaviors as matter-of-factly as they do situations. They do not trouble themselves or others by seeking to understand underlying motives or hidden meanings. SP leaders verbalize appreciation easily and often voice approval before the accomplishment or achievement in order to encourage others.

Contributions in a Management Team: An SP leader can spur action to a management team as can no other type. Things are sure to happen with this type around. SPs probably will be at their best in verbal planning and decision-making. They may not want to be or be good at producing written documents. They can identify trouble spots in an organization while they still are minor and can prevent small problems from becoming large ones because of inattention. Operations are apt to run smoothly with an SP abroad, as they will detect early signs of trouble in these operations. Productivity is apt to be high and they usually will be aware of the comfort and working conditions of employees. SP leaders are not likely to allow unnecessarily bad working conditions to exist for employees without attempting to do something about it.

SP leaders need the support of an organized, thorough support staff who will provide reminders of scheduled appointments, who will schedule "unpleasant" jobs and will remind an SP manager concerning these, and who will see to it that long-term issues are given closure. They need support services to help in setting priorities and to capture in writing the endless flow of projects for future reference.

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LEADING IN STYLE: Stabilizer/Traditionalist

SJ leaders include the ESTJ who is the natural leader of this type,and the ESFJ, ISFJ, and ISTJ who will have to work a little harder at their leadership. Their primary hunger is for belonging and for contributing. They value harmony and service, want to be responsible and dependable, and almost always are.

Managerial Strengths: SJ managers easily establish effective managerial routines and create a stabilized system. They are decisive and excellent at the decision-making process. They understand the values of an organization as they exist and try to conserve these values. They understand policy and honor its intent. They are preservering, patient, work steadily with a realistic idea of how long a task will take. Seldom make errors of fact, tend to be outstanding at precision work, and can be counted on to follow through on commitments. Before they take action, they will weigh the consequences and will try to see the practical effect of the decision. They possess and admire "common" sense and are themselves orderly and admire this in others. They will be on time and on schedule.

SJ managers are best when they can plan their work and follow through on the plan. They like to get things clear, settled, and wrapped up, and may be restless until a decision is reached on a thing, situation, or person. Others with whom they work will know where they stand on issues.

Traditionalists leaders are applied thinker and want an organization to be run on solid facts. They are able to absorb, remember, manipulate, and manage a great amount of detail within a system. They are super-dependable leaders who are extraordinarily hard, steady workers. A good day's work for a good day's pay makes sense to SJ managers. The superiors of this leader can count on them, as can their subordinates, to know, respect, and follow the rules, expecting them to apply equally to all.

SJ managers will run efficient meetings, will be most comfortable with a well-ordered, well-planned agenda. They will establish a formal impersonal style of relating with colleagues until they are will acquainted. They enjoy established routines and are painstaking workers. SJ managers are thorough about the business of the organization, are loyal to its purposes and personnel, and are usually briefed to the last detail.

Possible Weaknesses as Managers: SJ managers may be somewhat impatient with projects which get delayed by complications. They may be inclined to decide issues too quickly at times, and at times, may not notice new things which need to be done. They are excellent at preserving the effective procedures of an organization, but also may preserve less successful rules and regulations, not taking time to examine them for results. They may not be as responsive to the changing needs of an organization as would be desirable, especially in times of rapid change.

SJ leaders are likely to hold that some people are good and some people are bad and that the latter should be punished. From this position, SJ managers can fall into relationships which create tensions, derived from their being, at times blaming, degenerating, and negative. They may find themselves responding to the negative elements of people as they become overtired and pressured. If they do not make a conscious effort, they may slip without awareness form "this is a bad act" this is a bad act and therefore this is a bad person.

A sensitive pressure point for Traditionalists may exist in their possible tendency to be overconcerned with the possibility of dire happenings. They may exaggerate the probability of things going wrong and thus may find themselves using energies anticipating having to deal with crises which never occur. An additional element of the Traditionalist belief system is the notion that people can make something of themselves if only they work hard enough and long enough. This can pressure SJs into being highly competitive and to use their energies in pursuit of the perfect organizational system—thereby setting themselves up for failure.

Characteristic Ways of Dealing with Colleagues: SJ managers want their colleagues to stick to the point and to get to the point. They want the facts and likes stable, sensible, reliable people. They believe that they are realists, which, in fact they are when dealing with data systems. When they deal with human systems, however, they may not always be accurate in their perceptions of interpersonal transactions.

SJ leaders will be clearcut in their dealings with colleagues and if they feel that their colleagues are not observing agreed-upon procedures and policies, will call this to their attention, but they may do this before others rather than privately, or with words which are unnecessarily critical and harsh. They may find it easier to comment on their own and others' weaknesses than their strengths, tending to take their own and others' strengths as obvious and expected—therefore not needing comment.

Traditionalist managers may withhold "strokes" unless they believe they are fully deserved and may have difficulty in accepting strokes from others—thereby transmitting an attitude of rejection which is unintended. SJ leaders may find the giving of symbolic strokes, such as honors, trophies, appointments to coveted positions, titles, etc. more comfortable than the giving of verbal or contact strokes.

Contributions in a Management Team: Traditionalist/Stabilizer leaders particularly compliment NF leaders who bring strong focus onto people as people; while SJ leaders supply an effective, smooth-running system. SJ managers are excellent at organization and in keeping the system running after crises situations are solved. They can maintain an excellent data flow upward and downward so those around them are kept well informed. They can supply stability to people systems. If an organization does not have an SJ manager on the management team, the environment may not be used effectively and efficiently. Plant utilization may be poor. There may be poor control of material and organizational procedures and far-reaching decisions may be made at inappropriate levels, for example, by clerical support staff personnel. Time and material waste may be present and stability may be lacking. A system without a traditionalist leader may find itself in a constant state of change without a base of effective and efficient policy and regulations from which to work.

INVOLVING OTHERS IN CHANGE: YOUR LEADERSHIP PRACTICES

I:	1 Rarely	2 Once in a While	3 Sometimes	4 Fairly Often	5 Very Frequently
1. involve others in planning the actions that will be taken......................	1	2	3	4	5
2. treat others with dignity and respect...	1	2	3	4	5
3. give people a lot of discretion to make their own decisions....................	1	2	3	4	5
4. develop cooperative relationships with all those I work with on committees and teams................................	1	2	3	4	5
5. create an atmosphere of mutual trust in the committees I lead, and on other projects I work on....................	1	2	3	4	5
6. get others to feel a sense of ownership for the committees and projects they work on...............................	1	2	3	4	5
7. appeal to others to share my dream of the future as their own.....................	1	2	3	4	5
8. describe the kind of future I would like for myself and peers to create together..	1	2	3	4	5
9. clearly communicate a positive and hopeful outlook for the future of our school.....	1	2	3	4	5
10. show others how their long-term future interests can be realized by enlisting in a common vision........................	1	2	3	4	5
11. look ahead and forecast what I expect the future will be like.................	1	2	3	4	5
12. am contagiously excited and enthusiastic about future possibilities.............	1	2	3	4	5

An Introduction to Learning Styles

Integrated and Applied Curricula Summer Conference

University of Wisconsin - Stout

June 20-23, 1994

Prepared by: Linda L. Riley, Associate Researcher
University of Wisconsin - Stout
Center for Vocational and Technical Education
225C Applied Arts Building
Menomonie, WI 54751
(715) 232-1885

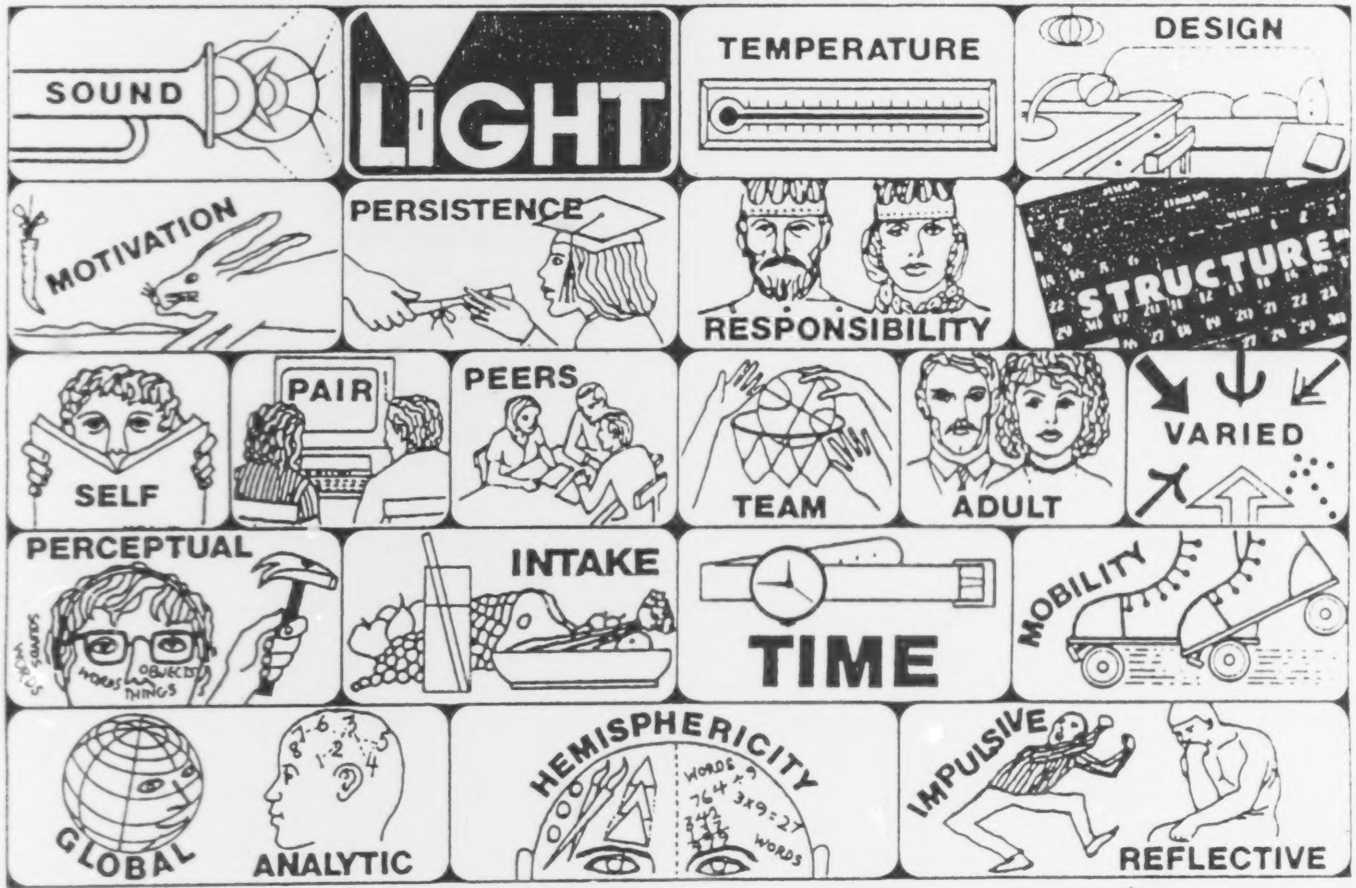
COMPARISON OF ELEVEN MAJOR LEARNING STYLES: Variables, Appropriate Populations, Validity of Instrumentation, and the Research Behind Them

THEORIST	ELEMENTS OF MODEL							
DUNN & DUNN	ENVIRONMENTAL	EMOTIONAL	SOCIOLOGICAL	PHYSICAL	PSYCHOLOGICAL			
N.A.S.S.P.	ENVIRONMENTAL	EMOTIONAL	SOCIOLOGICAL	PHYSICAL	PSYCHOLOGICAL/ COGNITIVE		STUDY SKILLS	
HILL				QUALITATIVE/ THEORETICAL SYMBOLS	MODALITIES OF INFERENCE	CULTURAL		
LETTERI					COGNITIVE STYLE			
RAMIREZ					BI-COGNITIVE STYLE	BI-CULTURAL		
REINERT				PERCEPTUAL MODALITIES				
SCHMECK					COGNITIVE PROCESSING		STUDY METHODS	RETENTION
HUNT		NEED FOR STRUCTURE	NEED FOR AUTHORITY DEPENDENT/INDEPENDENT					
KOLB					CONCRETE EXPERIENCE VS. ABSTRACT CONCEPTUALIZATION ACTIVE EXPERIMENTATION VS. REFLECTIVE OBSERVATION			
GREGORC					PERCEPTION/ ORDERING			
McCARTHY					INNOVATIVE/ANALYTIC/ COMMON SENSE/DYNAMIC HEMISPHERICITY			

Dr. Thomas C. DeBello, Principal
Northwest Elementary School
County Line Road
Amityville, NY 11701

LEARNING STYLES MODEL

DESIGNED BY
DR. RITA DUNN
DR. KENNETH DUNN


WORDS
SOUNDS
WORDS
OBJECTS
THINGS
8 7 6 3 5
1 2 4
WORDS
9
764
3x9=27
WORDS

Stimuli	ELEMENTS					
Environmental	SOUND	LIGHT	TEMPERATURE	DESIGN		
Emotional	MOTIVATION	PERSISTENCE	RESPONSIBILITY	STRUCTURE		
Sociological	SELF	PAIR	PEERS	TEAM	ADULT	VARIED
Physical	PERCEPTUAL	INTAKE	TIME	MOBILITY		
Psychological	GLOBAL	ANALYTIC	HEMISPHERICITY	IMPULSIVE	REFLECTIVE	

Simultaneous or Successive Processing

"My Notes"
Learning Styles - 5 Most Important Elements

DEFINITION: Learning Styles is the way people concentrate on, process*, and integrate new information. (*Analytical or global, right or left brain preference)

LIGHT

Effects 10-20% of the population.

DESIGN

Refers to formal or informal design of furniture. Most important environmental element. Effects 40-50% of HS students.

TIME OF DAY

Effects only 6% of the population but for these learners it is very important.

PERCEPTUAL MODALITIES *** -

MOST IMPORTANT TO REMEMBER: Maximum learning takes place when students are introduced to new material through their primary perceptual strength and information is then reinforced through their secondary strength followed by their tertiary modalities.

Auditory

30% of people are auditory learners, they can remember 75% of what they hear in an hour.

Visual

40% of learners are visual. They can remember 75% of what they read in an hour.

Tactual

These students learn best if they can do something with the information first with their hands.

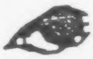
Kinesethic

Students need to move around to concentrate. Best to impose this on second strongest modality.

PSYCHOLOGICAL - HEMISPHERICITY

Refers to brain preference. Global and analytic learners process information in the opposite way

Introducing Material Through Strongest Modality

	Monday At School	Monday At Home	Tuesday At School	Tuesday At Home	Wednesday At Home
Auditory 			① Lecture	② Read, write and take notes on reading	③ Make something (give choices)
Visual 		① Read	② Lecture Write notes		③ Make something
Tactual 	① Flip shoot, etc.	② Read and write answers	③ Lecture		④ Make something
Kinesthetic 	Impose on next perceptual strength. (i.e. Can stand while lecturing or stand and walk while reading.)				

TYPICAL BRAIN BEHAVIOR

LEARNING STYLE COMPATIBILITY

SUCCESSIVE	SIMULTANEOUS
QUIET WHILE LEARNING	SOUND WHILE LEARNING
BRIGHT LIGHT	SOFT, DIM LIGHTS
FORMAL DESIGN	INFORMAL DESIGN
LEARNING ALONE OR W/AUTHORITIES	LEARNING WITH PEERS
ACADEMICALLY MOTIVATED AND PERSISTENT	LESS MOTIVATED/ PERSISTENT
AUDITORY	TACTILE AND VISUAL

HEMISPHERICITY

CHARACTERISTICS OF THE ANALYTIC/GLOBAL LEARNER

LEFT(ANALYTIC)	RIGHT(GLOBAL)
1.Needs to see parts first, then whole	1. Needs to see whole first, then parts
2. Verbal	2. Tactual/ Kinesthetic
3. Responds to word meaning	3. Responds to Pitch,feeling
4. Recalls facts, dates reads for detail	4. Recalls images/ reads for overview
5. Sequential	5. Random
6. Processes linearly	6. Processes in chunks
7. Responds to logical ideas and thoughts	7. Responds to humorous ideas and though
8. Trusts logic	8. Trusts intuition
9. Looks tidy and organized	9. Looks disorganized
10.Plans ahead	10. Spontaneous
11.Punctual	11. Less punctual
12.Reflective	12. Impulsive
13.Recalls people's names	13. Recalls people's faces
14.Speaks with few gestures	14. Gestures while speaking
15.Serious	15. Playful
16.More intellectual than creative	16. More creative than intellectual
17.Critical, analytical reading & listening	17. Creative, synthesizing reading
18.Improves existing	18. Invents new

HEMISPHERICITY

ACCOMMODATING THE ANALYTIC LEARNER

GIVE VERBAL INSTRUCTIONS

ASK STUDENT TO DO OUTLINING OF INFORMATION RATHER THAN SUMMARIZING

GIVE INTELLECTUAL RATHER THAN CREATIVE ASSIGNMENTS

GIVE WELL STRUCTURED ASSIGNMENTS

GIVE LOGICAL PROBLEM SOLVING ACTIVITIES

ACCOMMODATING THE GLOBAL LEARNER

PRESENT THE BIG PICTURE FIRST

TELL STORY ABOUT THE IDEA, USE JOKES, CARTOONS, HUMOR

USE VISUALS WITH COLOR

WRITE AND DRAW (IF YOU CANNOT DRAW CIRCLE OR UNDERLINE IMPORTANT WORDS) ON BOARD WHILE LECTURING AND ENCOURAGE GLOBAL LEARNERS TO ILLUSTRATE NOTES

USE SMALL GROUP TECHNIQUES

USE SYNTHESIZING/SUMMARIZING ASSIGNMENTS INSTEAD OF OUTLINING

GIVE BREAKS

GIVE VISUAL, KINESTHETIC INSTRUCTIONS OR DEMONSTRATE

ADOPT A LIVING CURRICULUM (NEWSPAPERS, MAGAZINES, TELEVISION)

GIVE CREATIVE ASSIGNMENTS - HUMOROUS, PLAYFUL, INTUITIVE,INVENTING OR EXPLORING

USE OPEN-ENDED ASSIGNMENTS AND QUESTIONS

USE TACTUAL MATERIALS - HANDS ON

USE POETRY, MYTH AND FANTASY

Learning Styles Network

The Center for the Study
of Learning and Teaching Styles

INVOICE

Date ________ Purchase Order # ________

Shipped to: ____________________

____

____

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5. Videotape: Conduct Research in Classroom ($95) ____
6. Videotape: How to Write & Get Published ($95) ____
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16. Training Inservice Package (TIP) Staff Development ($45) ____
17. Programmed Learning Sequences: (from TIPs) ($15 each)
    Contract Activity Packages___ Small-Group Techniques___
    Programmed Learning Sequences ___ ____
18. (a) Only Overheads ($95)
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19. Continuity Tester ($15) ___ ____
20. Contract Activity Packages $5 ea. ___ 7 for $30 ___ ____
21. CAP and PLS Sets: CAP ($10)___ PLS ($25)___
    Combined CAP and PLS ($30) ___ ____
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23. Programmed Learning Sequence on Homework ($20) ____
24. Perceptual Strength Homework Charts: ($8 each)
    Instruction ___ Class Chart ___ ____
25. Comics in the Classroom ($30) ___ ____
26. Touch and Learn Alphabet ($10) ___ ____
27. Wrap-Ups ($10 each) ____
28. Visual Vocabulary Videos ($185) ____
29. Learning Style Inventory - Primary Version ($40) ___ ____
    With Storybook ($45) ___ ____
30. Storybooks Explaining Style to Children: ($8 each)
    Elephant Style ___ Kids With Style ____

-continued-

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Grand Central and Utopia Parkways, Jamaica, New York 11439
(718) 990-6161, x 6335

[illegible] by the National Association of Secondary [illegible]

ORDERING INFORMATION

Number		LSI Grades 3&4	LSI Grades 5 & Above	PEPS Adults			Amount
_____	Answer sheet(s) and scoring (questions are printed on answer sheet and all forms are computer scored by Price Systems, Inc. in Lawrence, Ks.).	___ 1	___ 1	___ 1	@	4.00	_______
		___ 3	___ 3	___ 3	@	9.00	_______
		___ 10	___ 10	___ 10	@	22.50	_______
		___ 30	___ 30	___ 30	@	45.00	_______
		___ 60	___ 60	___ 60	@	75.00	_______
		___ 120	___ 120	___ 120	@	135.00	_______
		___ 500	___ 500	___ 500	@	509.00	_______

SPECIAL INSTRUCTIONS: When administering the LSI or PEPS, please make sure the following instructions are followed.

Use only a number 2 pencil. No other writing implement can be read by the scanning devise. Also, the scanning device cannot process copied or folded answer forms. Make sure the bubbles are completely filled out.

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_____ Narrative individualized interpreted report, add $2.00 to each individual scoring price. This option generates a 5 to 7 page individualized report for each individual (need to specify for which individuals you would like the individual report). _______

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Specify No. for - Grades 3-4 __________ 5-12__________ PEPS __________ _______

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_____ Learning Style Report (LSR), Grades 3-12, Computerized, IBM, (Indicate disk size) Allows you to print a 5 to 7 page individualized narrative interpretive summary from the data files created by the LSI-C IBM, PEPS-C IBM and Scan and Score @ $ 95.00

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______ Manuals ___ LSI @ 9.50 ___ PEPS @ 9.00 ______

______ Specimen set (Includes Manual, Answer sheet for each level, Interpretative Booklet and the LSI Specimen set also has a Research Report)
______ LSI @ $ 12.00 ____ PEPS @ $ 11.00 ______

______ Individual Interpretative Booklet 8 pp. $ .40 each ______

______ LSI Research Report @ $ 3.25 each ______

______ Teaching and Counseling Gifted and Talented Adolescents, by R. Milgram, R. Dunn and G.E. Price, 1993, 285 pp. $ 55.00 ______

______ Creating Quality in Teaching & Learning...a Learning Styles Training Manual by C. Marshall, QES, $ 95.00 ______

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A $30.00 charge will be added for special handling such as overnight processing, etc.

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RITA DUNN, JEFFREY S. BEAUDRY, AND ANGELA KLAVAS

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Survey of Research on Learning Styles

A number of studies conducted during the last decade have found that students' achievement increases when teaching methods match their learning styles—biological and developmental characteristics that affect how they learn.

Research on learning styles has been conducted at more than 60 universities over the past decade. These investigations have yielded useful findings about the effects of environmental, emotional, sociological, physiological, and cognitive preferences on the achievement of students. Learning style is a biologically and developmentally imposed set of personal characteristics that make the same teaching method effective for some and ineffective for others.

Every person has a learning style—it's as individual as a signature. Knowing students' learning styles, we can organize classrooms to respond to their individual needs for quiet or sound, bright or soft illumination, warm or cool room temperatures, seating arrangements, mobility, or grouping preferences. We can recognize the patterns in which people tend to concentrate best—alone, with others, with certain types of teachers, or in a combination thereof. We become aware of the senses through which people remember difficult information most easily—by hearing, speaking, seeing, manipulating, writing or notetaking, experiencing, or, again, a combination of these.

Learning style also encompasses motivation, on-task persistence versus the need for multiple assignments simultaneously, the kind and amount of structure required, and conformity versus nonconformity. When a National Association of Secondary School Principals (NASSP) Task Force (1983) examined all the characteristics that influence student achievement, intake preferences (individual needs for eating and/or drinking while concentrating) achieved the highest reliability. Chronobiology is also part of style: some people are "morning people"; some are "night owls."

There are only three comprehensive models of learning style (Hill et al. 1971, Keefe et al. 1986, Dunn et al. 1975, 1979, 1981, 1985); others address only one to four elements, usually on a bipolar continuum. Although various scholars define the concept differently, only a few learning style identification instruments are reliable and valid (Curry 1987).

Correlational Studies

To investigate connections between individual preferences and other influences on learning, researchers have conducted correlational studies to establish the relationships between learning style and birth order, cognitive development, maturation, hemisphericity, field dependence/independence, global/analytic processing, temperament, and self-concept. Their comparisons examined learners at all levels from primary school through adulthood. They differentiated among gifted, musically and artistically talented, average, underachieving, at-risk, nontraditional, reading-disabled, special education, dropout, and adolescent psychiatric populations. Researchers further tested consistency of style over subject matter and time. In addition, the researchers determined the responsiveness of basal readers to style differences, and they also examined the extent to which teacher training programs complemented their student candidates.

Correlational studies also explored the similarities and differences between and among diverse groups. Thus, researchers developed profiles of the styles of a wide range of learners, including students at various levels of achievement in diverse age groups; gifted, learning disabled, and mentally retarded students; supervisors and their supervisees; teachers and their students; Southeast Asian and American Caucasian college registrants; and numerous other groups. In addition, comparisons were made of the learning styles of Bahamians and Jamaicans; Afro-Americans and Caucasians; and Afro-, Chinese, Greek, and Mexican Americans (*Annotated Bibliography* 1988; *Learning Styles Network Newsletter* 1980-1988).

Correlations Between Learning Style and Hemisphericity

As new findings about left/right brain functions appeared, researchers investigated the connections between learning style and hemisphericity. The terms *left/right*, *analytic/global*, and *inductive/deductive* have been used interchangeably in the literature; descriptions of these pairs of variables parallel each other. Lefts/analytics/in-

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ductives appear to learn successively, in small steps leading to understanding, rights/globals/deductives more easily learn by obtaining meaning from a broad concept and then focusing on details

Studies that examined the similarities and differences between hemispheric style and other elements of learning style revealed that, when concentrating on difficult academic material:

1. High school students who were less motivated than their classmates and who preferred working with *distracters* (music, low illumination, informal or casual seating, peers rather than alone or with the teacher, tactile rather than auditory or visual instructional resources) scored right-hemisphere significantly[1] more often than left-hemisphere. Also, students who scored high on persistence invariably scored high as left processors (Dunn et al. 1982) (The latter data may have implications for time-on-task research.)

2. Left-hemisphere youngsters in grades 5-12 preferred a conventional formal classroom seating design, more structure, less intake, and visual rather than tactile or kinesthetic resources during learning significantly more often than their right-preferenced classmates (Cody 1983).

3. Right-hemisphere 5th through 12th graders disliked structure and were not adult motivated but *were* strongly peer motivated. Gifted and highly gifted students were significantly more often right or integrated than left processors (Cody 1983).

4. Right-hemisphere community college adult math underachievers preferred learning with sound and intake. They wanted tactile and kinesthetic instructional resources and mobility significantly more often than their left-hemisphere counterparts, who preferred bright light and a formal design [When the predominantly right-hemisphere students were taught alternately with both global and analytic lessons, they achieved statistically higher test scores through the global, rather than through the analytic, resources (Bruno 1988).]

Thus, correlational studies revealed sets of traits among students within the same age or grade and among those with similar talents, achievement, and interests. Even when culturally diverse groups were examined, there were as many within-group as between-group differences. Within each family, the parents, their offspring, and the siblings tend to be more different from than similar to each other.

Experimental Research

These correlational findings prompted

Researcher/Date	Sample	Subject Examined	Element Examined	Significant Effects Achievement	 Attitudes
DeGregoris 1986	6th, 7th, 8th graders	Reading comprehension	Kinds of sound needed by sound preferences	+ With moderate talking	Not tested
DellaValle 1984	7th graders	Word recognition memory	Mobility/passivity needs	+	Not tested
Hodges 1985	7th, 8th graders	Mathematics	Formal/informal design preferences	+	+
Krimsky 1982	4th graders	Reading speed and accuracy	Bright/low lighting preferences	+	Not tested
MacMurren 1985	6th graders	Reading speed and accuracy	Need for intake while learning	+	+
Miller 1985	2nd graders	Reading	Mobility/passivity needs	+	Not tested
Murrain 1983	7th graders	Word recognition/ memory	Temperature preference	0	Not tested
Pizzo	6th graders	Reading	Acoustical preference	+	+
Shea 1983	9th graders	Reading	Formal/informal design preferences	+	Not tested
Stiles 1985	5th graders	Mathematics testing	Formal/informal design preferences	0	Not tested

Note: Price (1980) reported that the older students became, the less they appeared able to adapt to a conventional setting. Thus, design may be far more crucial to secondary students' ability to concentrate than to 4th graders, who may be better able to adjust to this element. Dunn and Griggs (1988) described the importance of design to high schoolers throughout the United States.
(+) = significant positive findings at $p < .01$ or greater; (0) = no differences or slight trend.

Fig. 1. Experimental Research Concerned with Learning Styles and Instructional Environments

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researchers to conduct experimental studies to determine the effects of individual learning style on achievement, attitudes, and/or behavior.

On Instructional Environments

The extent to which classrooms appear either to stimulate or to inhibit learning for students with selected learning style characteristics has been documented in terms of individuals' needs for quiet versus sound, bright or soft lighting, warm or cool temperatures, and formal versus informal seating designs (Dunn 1987, Dunn et al. 1985; see fig. 1). These four elements affect from 10 to 40 percent of students, dependent upon age, gender, hemisphericity, and achievement. For example, the need for sound remains fairly consistent during the elementary school years but increases as adolescence begins and, as that stage passes, appears to return to its previously normal level. The younger children are, the less light they need; but about every five years most children require significantly more light than previously. Boys tend to require more mobility than girls and, thus, find sitting for any length of time difficult (Price 1980). However, teachers often view negatively the children who squirm in their seats, tap their pencils, complain about the temperature, or become hyperactive (in some cases because of too much illumination).

> **The need for sound remains fairly consistent during the elementary school years but increases as adolescence begins and, as that stage passes, appears to return to its previously normal level.**

On Perceptual Preferences

In addition to the instructional environment, sensory preferences influence the ways in which students learn. Eight studies within the past decade reveal that when youngsters were taught with instructional resources that both matched and mismatched their preferred modalities, they achieved statistically higher test scores in modality-matched, rather than mismatched, treatments (Dunn 1988; see fig. 2). In addition, when children were taught with multisensory resources, but *initially through their most preferred modality* and then were reinforced through their secondary or tertiary modality, their scores increased even more.

Perceptual preferences affect more than 70 percent of school-age youngsters. High school teachers who have translated their curriculum into electroboards, Flip chutes, multipart task cards, and Pick-A-Holes reported increased achievement and interest when such manipulatives were available for highly tactual students (Dunn and Griggs 1988).

Data from studies conducted before the late '70s concerned with perceptual

Researcher/Date	Sample	Subject Examined	Perceptual Preference Examined	Significant Effects Achievement	Significant Effects Attitude
Carbo 1980	Kindergartners	Vocabulary	Auditory, visual, "other" (tactile)	+	Not tested
Jarsonbeck 1984	4th grade underachievers	Mathematics	Auditory, visual, tactile	+	Not tested
Kroon 1985	9th, 10th graders	Industrial Arts	Auditory, visual, tactile, sequenced	+	Not tested
Martini 1986	7th graders	Science	Auditory, visual, tactile	+	+
Urbschat 1977	1st graders	CVC Trigram Recall	Auditory, visual	+	Not tested
Weinberg 1983	3rd graders	Mathematics	Auditory, visual, tactile	+	Not tested
Wheeler 1980	Learning disabled 2nd graders	Reading	Auditory, visual, tactile, sequenced	+	Not tested
Wheeler 1983	Learning disabled 2nd graders	Reading	Auditory, visual, tactile	+	Not tested

(+) = significant positive findings.

Fig. 2. Experimental Research Concerned with Perceptual Learning Styles

strengths often were conflicting because of inappropriate statistical designs, poor analyses, misinterpretations of the findings, and/or faulty conclusions. Those investigators examined *group* mean gain scores—which are inappropriate for determining whether individuals achieve better, the same, or less well in comparison with their own baseline data when they are taught through their preferences. In addition, the words *tactile* and *kinesthetic* often were used interchangeably. *Tactile* suggests learning with hands through manipulation of resources, but writing is not tactile enough for children below 4th grade. *Kinesthetic* implies whole-body involvement, such as taking a trip, dramatizing, interviewing, or pantomiming. However, even when older studies identified tactile strengths, their treatments did not *introduce* the new material that way. Finally, studies that employed many diverse instruments, populations, methods, and statistical designs and that confused the terminology could not yield solid data.

On Sociological Preferences

The influence of students' social preferences also affects their achievement in school. Figure 3 shows that, in four of five studies, when students' sociological preferences were identified and the youngsters then were taught in multiple treatments both responsive and unresponsive to their diagnosed learning styles, they achieved significantly higher test scores in matched conditions and significantly lower test scores when mismatched.

How do sociological preferences interface with cooperative learning? The higher the grade level, the less teacher-motivated students become (Price 1980). Thus, there are more peer-oriented youngsters able to work in well-organized small groups than there are students willing to learn directly from their teachers. Nevertheless, in every class we have ever tested, there are students who prefer to learn by themselves with appropriate resources, others who prefer to learn with peers, and some who wish to work directly with their teachers

Learning Styles and Student Diversity

Sue Loper

As a young teacher, I inherited a junior high classroom from a teacher who left in midyear. The students were totally out of control. I made it through the year, but I was not pleased with my performance.

I unloaded my feelings of frustration on Margaret Payne, who taught next door. She had a reputation for being able to teach even the worst students. In fact, she often accepted problem students during the year when other teachers could no longer tolerate them. Students liked learning in her class; she made them feel special and successful. Each time they succeeded, they wanted to try again.

Ms. Payne listened to my complaints, made sympathetic sounds, and proceeded to offer practical advice: that I teach my students the way they learned best; in other words, that I determine my students' preferred learning styles and provide activities to match them. She suggested that I use several methods of presenting material and include a variety of activities—individual and group projects—ranging from the replicative to the highly creative. Ms. Payne understood that different students learn in different ways, while teachers often teach as they have been taught (Dunn and Dunn 1978).

This was certainly true in my own case. Because I learn well auditorily, I tended to teach in a lecture format. Unfortunately, this tendency shortchanged the visual, kinesthetic, and tactile learners in my classroom. Because I am a self-directed learner, I assigned mostly individual projects to be completed by a certain date. These assignments were difficult for students who learned best in a group or with the help of an adult, or who needed encouragement, assistance, or prodding to finish a project. Furthermore, I didn't like gum chewing, foot tapping, or other extraneous movements or noise, yet I had students who *needed* those activities in order to learn (Dunn and Dunn 1978).

If a teacher teaches and evaluates in only one cognitive mode, he or she is adequately serving only those students who prefer to learn in that mode. To give every learner the opportunity to succeed, teachers can expand their repertoires to include a variety of cognitive modes. Teachers should also become aware of their own learning style preferences and of how those preferences affect their teaching methods. Yet another goal is to help students move from one preferred learning mode to a base of mixed preferences, so they can benefit from various instructional modes.

If we make these changes, we will improve our chances of success at educating a diverse student population.

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Dunn, R., and K. Dunn. (1978). *Teaching Students Through Their Individual Learning Styles: A Practical Approach*. Reston, Va.: Reston Publishing.

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From practical experience, educators generally consider the junior high school years a period of strong peer influence. By the beginning of grade 9, however, educators should expect movement away from that preference; Price (1980) found that students in grades 9-12 experience a greater need to learn and study alone than during any other interval. The gifted also prefer to learn alone unless the material to be mastered is difficult for them; when that happens, they prefer to learn with other gifted children (see fig. 3). Thus, except among the gifted, many students in grades 3-8 will learn better in small, well-organized groups than either alone or with the teacher. After grade 8, however, more will learn better alone.

In a small group structure, children who are frequently chastised for not

Except among the gifted, many students in grades 3-8 will learn better in small, well-organized groups than either alone or with the teacher. After grade 8, however, more will learn better alone.

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relieve the discomfort they experience because of mobility needs or hard chairs. This structure also permits youngsters to read together, discuss items, reason out answers, and use multisensory interactions. The various contributors may enjoy different processing styles; thus, they can help each other, especially when the teacher's dominant hemispheric style is incongruent with theirs. Despite th[illegible]antages to group work, students w[illegible]feel constrained by the slower group pacing or who enjoy the challenge of solving problems by themselves do not learn most easily through small group instructional strategies, nor do they enjoy the experience.

Research on Time-of-Day Preferences

It is common knowledge that morning people and night owls function better at their respective times of day. The research supports our easy acceptance of these preferences. For example, two junior high school principals revealed that the math underachievers in both their schools preferred learning in the afternoon but had been scheduled into morning math classes. When those youngsters were rescheduled into afternoon classes, they evidenced higher motivation, better discipline, and an increase in achievement. Three years later, a New York high school reported that time preference was a crucial factor in the reversal of initial and chronic truancy patterns among

<table>
<tr><th>Researcher/Date</th><th>Sample</th><th>Subject Examined</th></tr>
<tr><td>Cholakis
1986</td><td>106 underachieving, inner-city, parochial school 7th and 8th graders</td><td>Vocabulary development was provided through three strategies—by the teacher, alone by themselves, and in a peer group treatment.</td></tr>
<tr><td colspan="3">Findings: Those who preferred learning alone, scored significantly higher (.01) than those who preferred learning either with peers or the teacher. However, all students attained significantly higher achievement (.001) and attitude (.01) scores when learning with an authority figure.</td></tr>
<tr><td>DeBello
1985</td><td>236 suburban 8th graders</td><td>Students wrote social studies compositions and then experienced revision strategies that were congruent and incongruent with their sociological preferences.</td></tr>
<tr><td colspan="3">Findings: Peer learners scored significantly higher when matched with the peer-conferencing technique (.01). Authority-oriented learners, when revising through the teacher-conference, achieved statistically higher (.01) than when revising either through peer conferencing or self-review. And those who preferred to learn alone scored significantly higher (.01) when matched, rather than mismatched, with self-review. No learning style group achieved better than any other, but a significant interaction occurred between individual sociological style and the matched method of revision (.001). In addition, the attitudes of students who preferred to learn alone or with an adult were significantly more positive (.01) when they were assigned to approaches that matched their styles.</td></tr>
<tr><td>Giannitti
1988</td><td>104 suburban, parochial and public school 6th, 7th, and 8th graders</td><td>Social studies taught through both a mini-Contract Activity Package (CAP) and a small-group strategy, Team Learning</td></tr>
<tr><td colspan="3">Findings: Peer-oriented students achieved significantly higher test and attitudes scores when learning through Team Learning than through the mini-Cap (.01). Learning-alone preferents attained significantly higher test and attitude scores (.01) through the mini-Cap than with their peers. Non-preferenced students achieved better through the mini-Cap than through the Team Learning and liked working alone better than in groups. A significant interaction occurred between learning alone and peer-preferenced learning and the method of learning (mini-Cap and Team Learning).</td></tr>
<tr><td>Miles
1987</td><td>40 inner-city 5th and 6th graders</td><td>Twenty-two who preferred to learn alone and 18 who preferred to learn with peers were assigned randomly to two instructional groups that taught career awareness and career decision-making concepts in conditions both congruent and incongruent with their preferences.</td></tr>
<tr><td colspan="3">Findings: The matching of sociological preference with complementary grouping patterns increased achievement significantly on career awareness (.01) and career decision making (.01). In addition, students' attitude scores were statistically higher when they were taught career awareness (.01) and career decision-making concepts (.05) in patterns accommodating their sociological preferences. With the exception of career awareness achievement, neither sociologically preferenced group achieved better than the other but learning-alone preferents scored higher (.05) than peer-preferenced individuals.</td></tr>
<tr><td>Perrin
1984</td><td>104 gifted and nongifted, suburban 1st and 2nd graders</td><td>Problem solving and word recognition through both individual- and peer-group strategies. Learning with the teacher was eliminated as a strategy when not a single gifted child preferred to learn that way.</td></tr>
<tr><td colspan="3">Findings: Analysis of the mean gain scores revealed that achievement was significantly higher (.05) whenever students were taught through approaches that matched their diagnosed sociological preferences. Although the gifted tended to prefer to learn alone in their heterogeneously grouped classes, a small group of seven gifted, who previously had known each other from participation in a special, part-time program for the gifted, actually performed best when learning in isolation with other gifted children.</td></tr>
</table>

secondary students (Dunn et al. 1987). Similar data were reported by the director of five alternative high schools in Washington (Dunn and Griggs 1988).

In 1983, the matching of elementary students' time preferences with their instructional schedules resulted in significant achievement gains in both reading and math over a two-year period. One year later, *teachers'* time preferences were identified, and staff development was conducted during their preferred and nonpreferred times (early morning and immediately after school). Interestingly, those teachers implemented innovative instructional techniques significantly more often (as reported by their supervisors' evaluations) when *they* were taught during their most preferred hours. Then an elementary school principal in Kansas administered the *Iowa Basic Skills Tests* in reading and math to groups whose time preferences matched their test schedules—either early morning or afternoon. She reported significantly higher test gains in both subjects as compared with each youngster's previous two years' growth (Dunn et al. 1987.)

Studies of dropouts, underachievers, at-risk (Griggs and Dunn 1988), and vocational education (Tappenden 1983) students indicate that, as a group, they are *not* morning people; neither were the truants in the New York experiment. For each of these groups, learning in late morning, afternoon, or evening significantly increased achievement.

Most students are _not_ morning-alert.... Only about one-third of more than a million students we have tested prefer learning in the early morning, and the majority prefer late morning or afternoon.

Among the more interesting findings of research with time preferences is that *most* students are *not* morning-alert. At the elementary school level, approximately 28 percent appear to be "early birds"; many do not begin to be capable of concentrating on difficult material until after 10:00 a.m., and many are at their best in the early afternoon. Only about one-third of more than a million students we have tested prefer learning in the early morning, and the majority prefer late morning or afternoon. At the high school level, almost 40 percent are early morning learners, but a majority remain most alert in the late morning and afternoon; and, for the first time identifiable after early childhood, almost 13 percent are "night owls," able to concentrate on difficult material in the evening (Price 1980). However, most teachers are early morning, high-energy people but often experience lows after 1:00 p.m. Another large group of educators merely get by much of the day and become mentally alert toward evening.

Mobility Needs

One element of learning style is the need for physical activity, and a review of this research reveals how this need can be confused with other, more alarming diagnoses. For example, Fadley and Hosler (1979) noted that children often were referred to psychologists because of their consistent hyperactivity; their teachers complained that such youngsters were unable to sit quietly and pay attention during lessons. Those psychologists reported that most students sent to them were not at all clinically hyperactive; instead, they were normal children in need of movement. In addition, the less interested they were in the lesson, the more mobility the children required.

[illegible]	Means Passive b1	Means Active b2
Passive a1	8.70	5.45
Active a2	7.15	9.10

Note: a = preference; b = environment.
N = 20 [illegible]

Fig. 4. Analysis of Preference X Environment Interaction

Most children can master the same content; _how_ they master it is determined by their individual styles.

During the same period, Restak (1979) substantiated that "over 95 percent of hyperactives are males" (p. 230) and that the very same characteristic, when observed in girls, correlated with academic *achievement*. He deplored that boys were required to be passive in school and were rejected for aggressive behaviors there, but were encouraged societally to engage in typical male aggressions in the world at large; this paradox could lead to role conflict. Restak added that conventional classroom environments did not provide male students with sufficient outlets for their normal needs. He warned that schools actually *caused* conflict with societal expectations that boys not be timid, passive, or conforming.

Other researchers corroborated Restak's admonitions and chastised educators for believing that physical activities prevented, rather than enhanced, learning. Indeed, when previously restless youngsters were reassigned to classes that did not require passivity, their behaviors were rarely noticed. Eventually, teachers began to report that although certain students thrived in activity-oriented environments that permitted mobility, others remained almost exclusively in the same area despite frequent attempts to coax them to move (Dunn et al. 1986). That led to Fitt's (1975) conclusions that no amount of persuasion increased certain children's interest in movement, whereas others found it impossible to remain seated passively for extended periods. "These are cases of a child's style . . . governing his interaction with and within the environment" (p. 94).

DellaValle's (1984) research documented that almost half the 7th graders in a large urban racially mixed but predominantly black junior high school could not sit still for any length of time. Twenty-five percent could but only when interested in the lesson, and the remaining 25 percent *preferred* passivity. When preference and environment were matched, students' performance yielded significantly higher test scores than when they were mismatched. Figure 4 reports the post hoc analysis used to determine exactly where the interaction occurred. This analysis was conducted after the initial repeated measures design indicated a significant interaction at the .001 level.

Everyone Has One

Every person has a learning style—all have at least some preferences—the result of many influences. Certain learning style characteristics are biological, whereas others are developed through experience (Restak 1979, Thies 1979). Individual responses to sound, light, temperature, design, perception, intake, chronobiological highs and lows, mobility needs, and persistence appear to be biological; whereas sociological preferences, motivation, responsibility (conformity), and need for structure are thought to be developmental. The significant differences among diverse cultures tend to support this theory (*Learning Styles Network Newsletter* 1980-1988). Despite cultural influences, however, within each culture, socioeconomic strata, and classroom *there are as many within-group differences as between-group differences*. Indeed, each *family* includes parents and offspring with styles that differ.

Those who suggest that children should learn to adapt to their teachers' styles disregard the biological nature of style.

Those who suggest that children should learn to adapt to their teachers' styles disregard the biological nature of style, They also disregard Cafferty's (1980) findings that the closer the match between each student's and the teachers' styles, the higher the grade point average; and the reverse. In addition, Kagan (1966) reported that his "success" with training impulsive students to become more reflective was evidenced only when adults were present. In addition, although Kagan's subjects learned to respond more reflectively, ***their accuracy on tasks was decreased.*** Thus, educators can see that learning styles are not lightly held; they demonstrate remarkable resistance to change.

Identifying learning styles as a basis for providing responsive instruction has never been more important than now, as educators meet the needs of a diverse student population. To identify their students' learning styles (Beaty 1986, Dunn et al. 1977, Marcus 1977), teachers must use a reliable and valid learning style preference instrument (Curry 1987). When permitted to learn difficult academic information or skills through their identified preferences, children tend to achieve statistically higher test and attitude scores than when instruction is dissonant with their preferences.

No learning style is either better or worse than another. Since each style has similar intelligence ranges, a student *cannot* be labeled or stigmatized by having any type of style. Most children can master the same content; *how* they master it is determined by their individual styles.☐

1. When we use the terms *significant* and *significantly*, we mean in a statistical sense.

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DACUM APPROACH

by

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June, 1994

Using The Dacum Approach To Identify The Content of Training Programs

Overview

DACUM (Developing A Curriculum) is a process for devising training programs that involve a minimum of time (approximately 1-1/2 to 2 days) to determine what should be learned. Ten to twelve incumbent workers and supervisors who are best at their jobs are brought together to explain in their language what they do and how they do it. Trainers get information that is ordinarily difficult to get. A chart of the information provided is developed to show a skill profile of what a worker has to be able to do on the job. The DACUM chart is called a single sheet skill profile. This process has proven to be a very effective method for quickly deriving, at a relatively low cost, the competencies (skills or task) that must be performed by persons employed in a given position or occupational area. It is used to determine the "what" of a curriculum, the content that needs to be known and skills that need to be learned.

Select the DACUM Coordinator

The coordinator should be a person who has a familiarity with the DACUM process. This person does not have to be a subject matter expert. His/her function is to ensure that the committee is familiar with the process. Once the committee knows that they are to identify behaviors or activities that the trainee must be able to do, rather than fuzzy subject content areas, the process moves very quickly. Presenting the committee with examples of completed DACUM charts is also helpful. The coordinator must be a person who is familiar with the brainstorming technique and some knowledge of group leadership techniques would be helpful.

The coordinator has the responsibility to keep the group on task so that a skill profile of what a worker does is reported as provided by the workers and supervisors. The coordinator records the tasks on cards and places them on a blank wall so that the group can constantly see what has and has not been recorded.

The coordinator provides a general overview of the process to the DACUM committee once it has been convened. This is followed by a description of the occupational area and the brainstorming technique. Explanations will be provided by the coordinator on how the information provided will be recorded.

To record the information, a blank wall of a room is selected with tables and chairs set up for the DACUM committee so that they face the wall. The coordinator records the information provided by the committee on 3 x 5 or 4 x 6 cards. They are placed on the wall so that consistent review may take place. A reusable mastic can be used to hold the cards on the wall. This will permit the coordinator to move the cards as needed during the sequencing process. A small pinch of mastic putty placed on the back of the card will hold it to the wall (See Figure 1). This mastic can be purchased at an art store.

Select Experts to Determine The Task Listing

Incumbent workers who are best at their jobs are selected to determine what they do on the job. These workers should have a varied range of experience from the relatively new worker to one with several years of experience. In addition, some of the experts selected should be supervisors in the occupation or job being analyzed.

Ten to twelve experts form the DACUM committee. They are workers and supervisors who really understand their jobs - what they do and how they do it.

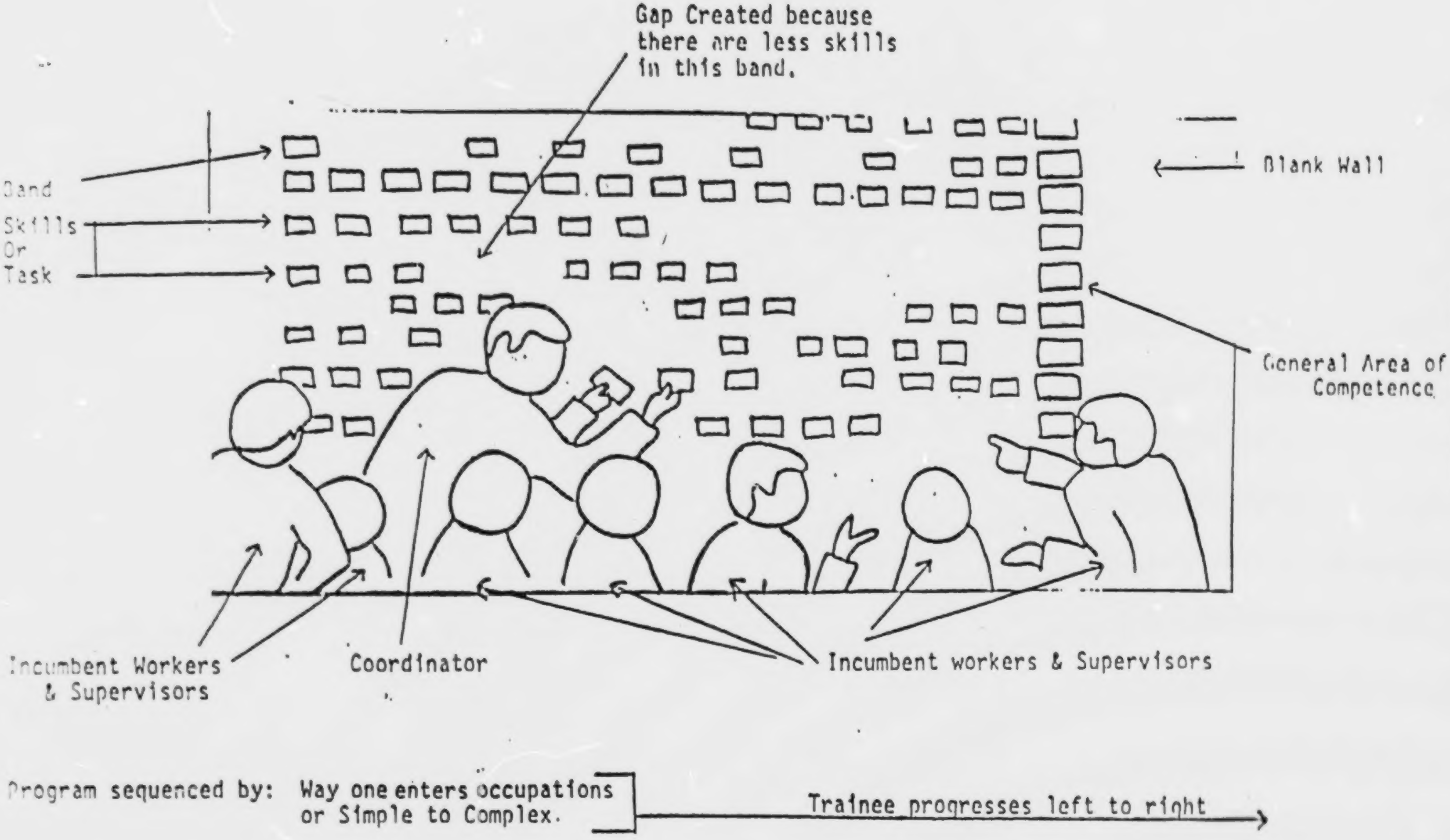
Gap Created because there are less skills in this band.
Band
Skills Or Task
Blank Wall
General Area of Competence
Incumbent Workers & Supervisors
Coordinator
Incumbent workers & Supervisors
Program sequenced by: Way one enters occupations or Simple to Complex.
Trainee progresses left to right

Figure 1
Chart Development

BEST COPY AVAILABLE

Conduct The Analysis to Develop The DACUM Chart

The workers and supervisors are brought together to begin developing the DACUM chart. The first-step in developing the chart is to Identify The General Areas of Competency. These are broad areas of the job that occupy a large part of the time on the job. These statements are arranged in a vertical column on the right side of the wall. Research indicates that most jobs consist of ten to twelve general areas of competency. These statements are preceded with the words which are understood "The Individual Must Be Able To . . . ". Thus only observable behaviors are identified. Each statement is made up of a verb and subject such as, "Service and Adjust Flue Systems". The general area of competency (GAC) statements are kept as short as possible - five to eight words. Each of the GAC's are written on 4 x 6 cards and placed on the wall. When the brainstorming has been completed, the coordinator opens up the discussion to determine if all statements are GAC's or could some of the statements be combined as part of another GAC, or, is the GAC a task under another GAC. This process takes 1-1/2 to 2 hours.

The second step is to identify the skills (tasks) that one has to learn to become competent in the general area of competency. The committee selects one general area of competency and develops the skills statements which are put on 3 x 5 cards by the coordinator. Each of the cards is placed on the wall to the left of the GAC without regard to order (Remember brainstorm format). The opportunity for discussion will be provided later. The committee selects another GAC and proceeds to identify all skills necessary to be learned to become competent in the GAC. This process proceeds until all general areas of competency (GAC) have been analyzed. This process takes approximately six to eight hours depending on the jobs or occupational area.

The GAC with the skill statements to the left of it is called a row or band.

The _third step_ in the process is to sequence the skills in each band to put them in a more desirable order. The coordinator reviews each band with the committee to determine the learning sequence. In addition, the coordinator goes over every skill statement to further clarify it and make it more precise. Sequencing provides the opportunity to refine the individual skills.

The coordinator picks the band with the largest number of skills (cards) in it and indicates to the committee members that they are to sequence the band from left to right by using one of the two methods listed below.

1. Sequence the bands by how a worker enters the occupation. If one enters the carpentry trade by "Laying Roof Shingles" then this skill would be listed on the far left of the chart and sequencing would take place in this manner moving the cards based on how one enters and progresses in the occupation or job. Sequencing in this manner is done for a geographical area. For example, in a large metropolitan area the worker may enter the carpentry trade by "Laying Roof Shingles" while in a small rural area one may enter by "Laying Out The Area For Excavating The Basement Of A House".

2. The second way to sequence the tasks or skills is to make sure the simplest tasks are placed on the left of the chart and proceed in complexity from left to right. Thus the person who has mastered the left part of the chart would be employable at a low level. Keep in mind that as one moves through the chart from left to right a greater level of competency is required.

The reason for the two methods is because a subject oriented course or program will be sequenced different from that of a training program. The sequencing might in some cases be based on interest rather than simple to complex or by the way one enters the job. Thus, the DACUM has very few hard and fast rules. DACUM has to change with the demands placed on it.

Now that the skills have been sequenced, the fourth step in the process is to Structure the Skills into a finished profile. The committee is asked to vertically align the skills from the different horizontal bands. Gaps may appear in some bands. This is brought about by vertically aligning the bands since some bands have less skills than other bands. Remember the trainee enters the chart from the left and progresses through the skills from the left to right.

The fifth step is the Final Inspection to determine if changes or additions need to be made. Once the committee has no further changes or additions the DACUM chart is considered complete. The job title and rating scale are added to the chart.

The rating scale provided is a six-point scale. The training program strives to reach the number three level of competency. In some cases, reaching number two level of competency may not prevent one from being employed. The rating scale can be revised to meet any special need or concern. However, the rating scale does communicate with employers better than A, B, C and etc.

Discussion. The chart is issued to the trainee with a master chart kept by the trainer. Each time a skill is tried, a rating is provided and dated. When enough skills have been mastered or time run out, the chart becomes a communication device between the trainee and the trainer. If the employer asks the trainee what he can do, he shows the chart to the employer indicating this is what he has learned and how well he has learned it. If the employer likes what has been shown then he/she may hire the trainee. The rating scale is provided in Figure 2.

FIGURE 2

DACUM

TRAINEE EVALUATION SCALE

Can perform this task with more than acceptable speed and quality, with initiative and adaptability and can lead others in performing this task.	6
Can perform this task with more than acceptable speed and quality and with initiative and adaptability to special program situations.	5
Can perform this task satisfactorily without supervision or assistance with more than acceptable speed and quality of work .	4
Can perform this task satisfactorily without assistance and/or supervision.	3
Can perform this task satisfactorily but requires periodic supervision and/or assistance.	2
Can perform this task, but not without constant supervision and some assistance.	1
Cannot perform this task satisfactorily for participation in a work environment.	0

Source: Jones, T.M. and R. E Adams, An approach to curriculum, learning and education in occupational training. A Nova Scotia Report.

NOTE: If a task on a DACUM has not been rated, the trainee did not try to learn the task.

After the chart is developed on the wall, the information is put on paper. It is a good idea to number the general areas of competency from top to bottom. For example, the band at the top would become 1.00 with skills being numbered 1.01, 1.02, 1.03 etc. The second GAC would become 2.00 with skills being numbered 2.01, 2.02, 2.03 etc. If one wants to revise the chart at some future date it is easy to reconstruct it on the wall.

Develop Instructional Objectives

Each of the skill statements can be expanded into a full performance or instructional objective(s). An instructional objective tells exactly the conditions under which the trainee is expected to perform and also what the standard of performance will be. The conditions and standards to be added should be as near to the situation where the trainee will be employed as possible. Obviously on-the-job training is a real life situation.

Implementing Training

Once the DACUM chart has been developed, the tasks (skills) are selected for training. The student is provided with the DACUM chart revealing what is to be learned and where it is to be learned. i.e., in a formal school setting, training program or on-the-job. As a trainee completes a task or skill, an evaluation is provided to determine the competency level achieved. The trainee can rate himself/herself and the trainer provides a rating. These ratings are recorded on the student's DACUM chart.

A chart detailing machine tool operations was not included by the author as part of this document submitted to ERIC.

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A CONVERSATION AROUND MULTIPLE INTELLIGENCES

A PRESENTATION AT THE STATEWIDE INTEGRATED & APPLIED CURRICULUM CONFERENCE

JUNE 20-23, 1994

BY: Dr. Donald J. Viegut
Merrill School District

OUTLINE

1. The Fortier/Moser Task Development Record.
2. The Content & Process of Applied & Integrated Curriculum.
3. How does the issue of multiple intelligences relate to applied and integrated curriculum.
4. What Howard Gardner & David Lazear are saying about multiple intelligences.
5. How to incorporate multiple intelligences into curriculum development at the local level.
6. The UW S-T-W training effort.

Content & Process
# of Integrated & Applied
Curriculum

Content

1. Integrated curriculum cannot be busy-work for students
2. Task's or units of instruction should align with a Wisconsin Learner Outcome
3. Should align with the U.W. discipline specific entry level competencies. (presently being developed)
4. Should be contextualized (addresses the career component of the Wisconsin developmental guidance model).
5. The task's or units of instruction should be performance - based assessed (aligning curriculum with the Wisconsin Student assessment system).
6. The lesson plan itself should indicate how multiple intelligences are addressed during lesson delivery.
7. The expected outcome from the task or unit of instruction should align with a National Standard. ie, NCTM Standard, goals 2000, National Science Standards, Scans Competencies

Process

1. Identify a team within your school who are change oriented people

2. Gather information on the component parts. Dialogue to the point that individuals internalize.

    A. The need for change

    B. The relationships among the components

    C. Brainstorm ideas that will focus on a process that is conducive to the culture of your organization. (What will work for you)

    D. Establish the framework for your local plan. Base your plan on sound research.

    E. Understand & engage the work of Peter Senge (M.I.T.) on learning together & continuous learning.

    F. Your plan must easily flow with the scope & sequence of the educational plan within your district.

    G. Fund your plan (funding should always be contingent upon a quality plan).
        - Staff Dev.
        - Common Curr. Dev. Time
        - etc.

BY: Dr. Donald J. Viegut

Creating Smart Workers for the Smart Work Place

By Nancy Nachman-Hunt, Senior Editor

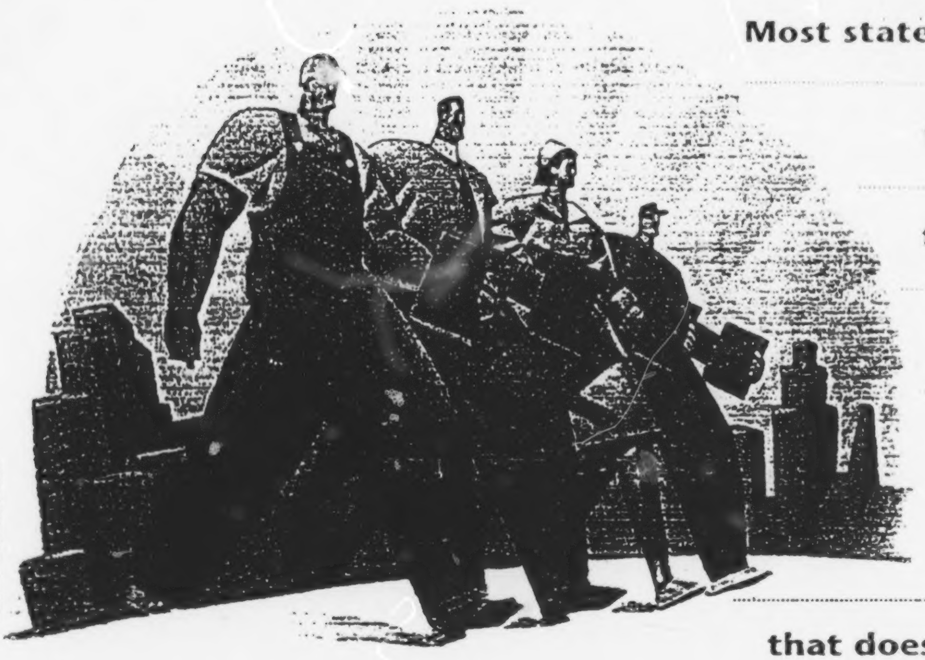


ILLUSTRATION: FRED INGRAM

Most states tout time-tested training programs to lure companies. But some want to offer you a work force that doesn't need training.

IN 1992, BMW PLACED ITS FIRST NORTH American assembly plant in South Carolina. Why? Free technical-skills training, leadership and team-building training, and a youth apprenticeship program, among other things. In 1992, the Australian airline Qantas moved its U.S. reservations center to Tucson, Arizona. Why? Largely because of Pima County Community College's customized communications and customer-service training programs.

Last year, when Germany's Daimler Benz was tantalizing southeastern U.S. communities with inquiries about locating its first North American plant, Alabama showed off its industrial training programs to the car company. The state pitched the company with its work force recruitment, screening, pre-employment testing, on-the-job-training, and skills-upgrade training. Alabama won the project. Why? The state's training package was the icing on the cake of its monster ($300 million-plus) incentive package, says Doug Freeland, Alabama's Industrial Development manager of media services.

In March, Chrysler Corp. announced it will place sheet metal stamping operations for a new mini van at its Twinsburg, Ohio, plant. Why? Because Ohio will help retrain the plant's employees to work with the new technology in Chrysler's transfer presses.

The list goes on.

The Training Perk Isn't New

Worker training as a lure to reel in companies on the move is not new. In fact, worker training has been a perk in state financial incentive packages for more than 40 years. North Carolina started it all in the 1950s, when it began offering customized worker training through its industrial education centers. Arizona is the latest state to jump on the bandwagon, adding worker training funds to the state budget in 1993.

From Alabama to Wyoming, every state in the union has some sort of customized worker training program for resident companies. The programs range from free of charge to partially funded, from those that offer everything and anything a company asks for to those that are offered only to companies contributing net new jobs to a state's economy. Individual state funding ranges from a low of $3 million (Arizona) to a high of $53 million (New Jersey).

Corporate America vs. Public Sector Training

What's new is this: What was once a perk that received faint praise from private industry is taking on critical importance in the location selection decision. There are several reasons for this change.

First, training is becoming more expensive. "In 1985, a company spent about $2,000 a year per employee on training. In 1992, it was $8,000," Robert Ady, president of the Chicago-based PHH Fantus Consulting, told a group of educators and business people last summer in Denver. "We project, based on our client's needs at this point, that the expenditure could go as high as $20,000 to bring new employees up to speed by 2000."

Add to that the fact that, by the turn of the century, fully 75% of today's work force will have to be retrained to keep up with state-of-the-art technology, according to a U.S. Department of Labor-American Society for Training and Development (ASTD) survey.

Next, public sector training is forging a higher performance reputation with corporate America. Even two years ago this was not the case. In 1992, the National Association of Manufacturers (NAM) and the U.S. Department of Labor held CEO focus groups on work force readiness in 10 U.S. cities. At that time the CEOs expressed general mistrust of government training programs. They complained about too much paper work, obsolete equipment, or too much emphasis on technical training and too little on people skills.

CEOs also said there was a general lack of understanding between training providers and recipients as to what the training should do.

Such is not the case anymore, says Phyliss Eisen, the NAM-Department of Labor work force readiness project director. "There has been substantial outreach done by federal and state government. It's still complicated; small companies in particular are still overwhelmed by the forms, but I see a sea change — not a hurricane or a tornado yet, but a shift in the wind."

Fred Gould counts himself as among the converted. Gould is director of Chipsoft's Tucson, Arizona-based customer and technical service call center. The company produces tax preparation software. When Chipsoft located the call center in Tucson, Gould knew that to get state training dollars, he would have to work through Pima County's community college.

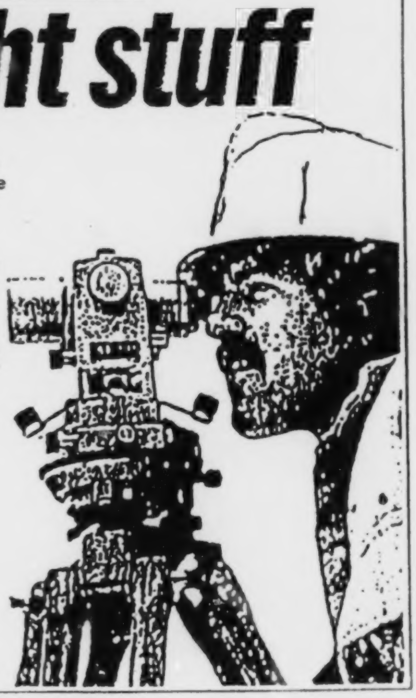
"Until we got to meet the parties involved, there was a certain caution," he admits. Now he says the training program was a lifesaver that allowed the company to hit the ground running from virtually the day it opened its doors in Tucson.

ASTD vice president for new business development Ed Schroer says the increase in corporate use of public sector training has been dramatic over the past couple of years. "I'm sure when you sample the corporate population you get a pretty strong negative about government training, but these programs are supported [by business] and are broadly used. Corporations are beginning to recognize that they are skill resources."

Al Pope, government training and resource executive for Chrysler, is an unflagging supporter. "We've been fortunate [with the worker training infrastructure] in all our operations' locations," he says. "There are some great ideas out there on how to develop training. There is some very progressive thinking going on."

The buzzwords of this sea change are high-performance work place, total quality management, diversified manufacturing, empowerment, and techno-literacy. They all point to the ever greater need business has for smart workers.

The eighth grade-educated, production-line worker created by Frederick



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Circle information number 4

Winslow Taylor and Henry Ford is on the path to extinction in the United States. Mass production practices that have already fallen by the wayside in Japan, Germany, and other European countries are dying here, too, albeit slowly.

Some say they are dying too slowly. The percentage of U.S. companies converting to the high-performance work organization models of the future is estimated at somewhere between 5% and 15%, according to the National Association of Manufacturers.

But the shift is happening. It's happening because, as Chrysler's Al Pope says: "To be globally competitive, you've got to do things differently than you did."

As BMW, Qantas, Daimler Benz (all foreign-headquarters companies, interestingly), and Chrysler know, it costs more to train workers to be techno-literate, problem-solving, empowered employees than it does to train workers who are expected to check their brains at the factory door along with their lunch pails.

The Case Against Customized Training Perks

As business's work force requirements change, so do the ways in which states and local governments help business get the workers it needs. In fact, the worker training programs of today could go the way of Taylor's mass production theory. Although some form of worker training bait will doubtless always be a part of certain states' business attraction strategies, Dan Pilcher, economic development expert at the Denver-based National Conference of State Legislatures (NCSL), would like to see another sea change — this one in the way states view training as a business recruitment tool.

"We have [training programs] here in Colorado," he says, adding with some sarcasm: "And desperate and needy companies such as Merrill Lynch and American Express, among others, get paid training to come to Colorado. To be blunt, I don't like it."

Pilcher agrees that if customized job training packages are being provided by states because their existing education system has failed to produce workers who can read, write, compute, and think, an argument can be made that public dollars should be spent to raise the skills of the total work force. But he suggests further that "when you start targeting training for specific firms, as opposed to broad-based skills — reading, writing, speaking, communication, and all that — my sense is that [business] should train its own workers. Why should the public subsidize them?"

In fact, Pilcher says, states are starting to rethink the whole issue of work force training and development. It's part of the new, so-called Third Wave of economic development theory. Under this thinking, rather than state and local governments using financial incentives such as training to attract industry, the objective is to create a statewide environment where business can prosper, taking advantage of an indigenous work force and infrastructure that are already of world-class quality.

Rather than training to upgrade

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worker skills, it's the school-to-work transition that sparks Pilcher's and other third wavers' interest — things like youth apprenticeship programs that join business and education in public high schools.

The Work Force Training Revolution

Wouldn't it be great, say Third Wavers, to have students coming out of public high schools and community colleges who could already read, write, think, work in teams, solve problems, and compute? In short, wouldn't it be great if public education systems produced graduates already equipped to enter the high-performance work place?

In June 1993, state legislators, business executives, union leaders, and economic development officials from five states gathered for six days at Snowbird, Utah, to try to figure out a way to construct public-private agencies and programs to further that end.

Twenty-one states applied for the NCSL 's Investing in People policy institute. NCSL picked Connecticut, Washington, Kentucky, Iowa, and West Virginia to attend. "And Ohio so much wanted to do this that the Ohio Legislature appropriated $200,000 to fund the project and, in effect, brought us in as the consultants," says Pilcher.

Out of the Snowbird sessions came plans for a revolution in how states provide business with ready-to-work workers, according to participants.

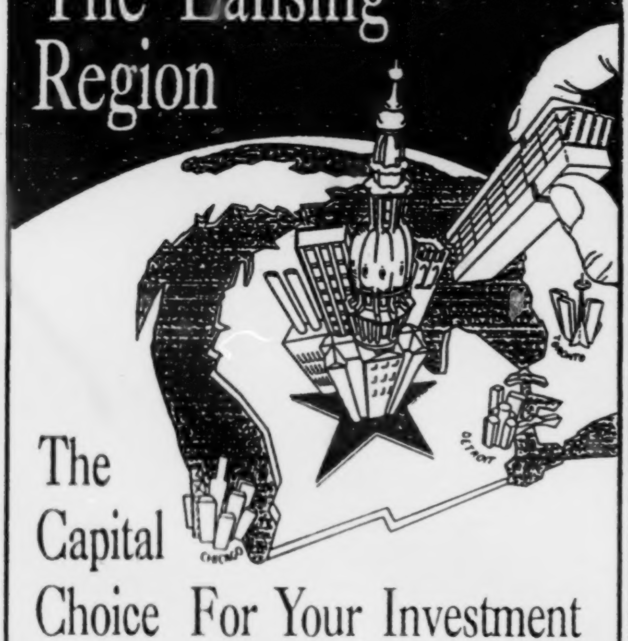
"Take Kentucky, for example. Their original proposal was a school-to-work transition system for selected industries, something for workers in declining industries, and competency standards for workers in certain industries," Pilcher says. "What came out of Snowbird was an agreement that essentially said they wanted to totally revolutionize their [work force training] system."

Kentucky's new vision for a work force training system is outlined in legislation (House Bill 475 and Senate Bill 195) that, if passed, will create regional public-private work force training alliances across the state. The alliances would include representatives from technical schools, community colleges, labor, management, and local school districts, according to one of the bills' sponsors, Representative Bill Lear. The bills are currently slogging their way through the legislative process in the Bluegrass state.

Connecticut's plans are to institute public education and worker training program reform from kindergarten through post-secondary schools.

While the effort is well funded and ambitious, it is unfocused. Connecticut plans to add direction to its investment "by providing 'consumer reports' on training providers, labor market trends, career options, and full-time educational opportunities at one-stop career centers throughout the state," according to a report on its efforts at Snowbird. Connecticut's Snowbird declaration also includes plans to provide public sector assurance that resident businesses have the opportunity to learn and practice high-performance work organization philosophy.

Washington, West Virginia, and Iowa have developed similar plans.



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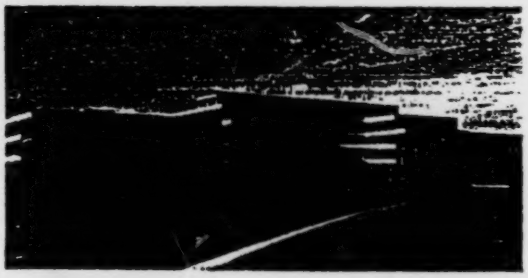

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Congress Puts $100 million to Work for High School Grads

Outside the confines of the NCSL's policy institute, the U.S. Congress last fall appropriated $100 million for school-to-work transition programs. Of that money, $15 million is being distributed among the 50 states, the District of Columbia, and Puerto Rico to help plan strategies for implementing school-to-work systems. Some $36 million in implementation grants will be awarded to between four and eight states that are ready to start moving now on school-to-work plans. Grant winners have yet to be announced.

In addition, more than half the states are addressing the need for school-to-work transition programs.

Oregon is well on the way, with its Certificate of Initial Mastery which, by the end of 10th grade, shows a students's competence in basic subject matter. Students in the 11th and 12th grades in Oregon public schools can already choose from two different paths: college preparatory or professional/technical/vocational education.

School-to-Work Transition Programs Top the Agendas of 28 State Legislatures

California
Colorado
Connecticut
District of Columbia
Delaware
Florida
Idaho
Indiana
Kansas
Kentucky
Louisiana
Maine
Massachusetts
Michigan
Minnesota
Mississippi
New Hampshire
New York
North Carolina
Pennsylvania
Rhode Island
South Carolina
South Dakota
Tennessee
Vermont
Virginia
Washington
Wisconsin

Source: National Conference of State Legislatures, Denver, Colorado.

Ohio's are 5 years old. The state's department of vocational education designs curricula based on business- and industry-validated occupational skills and standards, according to Darrel Parks, director of vocational and career education at the Ohio Department of Education. Parks convened more than 700 Ohio businesses to validate what competency means in 43 different occupational areas. "We used those competencies to revamp our curriculum across the state," he says.

Now, rather than a graded transcript and diploma, the department issues what it calls a career passport that identifies the specific technical competencies a student has mastered.

"As an employer, when a vocational education product (an individual) comes into your plant for a job interview, if he or she has a passport, you will know all the competencies that a student has. It is formatted on an I-can-do basis," Parks says.

Anything that helps companies realize the need to put in place long-term training strategies — whether it be training provided as a site selection perk, state governments funding school-to-work transition programs, or private sector testing companies developing work place competency tests — is a step in the right direction, according to Eisen, Pilcher, and others. It's more than a site selection perk, they say. It's a matter of corporate and national economic survival in a global economy. EM

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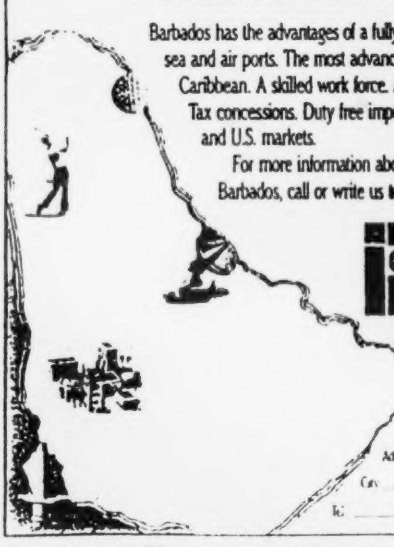

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HOWARD GARDNER on Learning for Understanding

BY ELIZABETH DONOHOE STEINBERGER

Howard Gardner has challenged not only the ways in which we see ourselves and our children, but also the ways in which we teach and learn. His book *Frames of Mind*, published in 1983, forwarded his theory of multiple intelligences, which shook the bedrock of traditional cognitive psychology by advocating that each individual is smart in many more ways than can be measured by conventional IQ tests.

In 1991, Gardner attracted national attention in *The Unschooled Mind* by arguing that even the best students in the best schools leave the classroom with flawed theories about how the world works and why people do what they do. Gardner, a professor at Harvard University's Graduate School of Education, believes that schools have substituted various proxies, such as Carnegie units and other credentials, for genuine knowledge, understanding, and achievement.

An author of a dozen books, Gardner has worked with victims of brain disease at the Veterans Administration Medical Center in Boston as well as with highly artistic children at Harvard. Most recently he has directed his efforts toward ATLAS (Authentic Teaching, Learning, and Assessment for all Students), a collaborative project supported by the New American Schools Development Project.

How are teaching and learning being reshaped in ATLAS communities? Gardner describes the reforms he believes are needed for genuine student understanding and achievement in an interview with *The School Administrator*.

You have suggested that one of the most striking aspects of educational reform has been the silence about educational purpose. What do you see as being the purpose of schooling in today's world?

Gardner: We managed to go through several years of reform by focusing on things where there probably wasn't going to be a huge amount of disagreement. One point of agreement was that we need to have kids who have basic skills and who work hard—that was not very controversial.

A second was that if we want teachers to be professional, they have to have more control over their lives and what happens in schools. That was not terribly controversial either.

My analysis suggests, however, that ultimately we have to bite the bullet and say what schooling is for and ask how we know whether we are achieving that. So a couple of years ago, I bit the bullet and said the purpose of education is to enhance students' understanding.

This, in itself, is not controversial, either. But when you ask what is understanding and how do you know whether you have achieved it, these questions become very controversial.

What do you mean by "understanding"?

Gardner: Let's say, for example, you have 16 Carnegie units or that you get a certain score on a standardized test. Can I assume then that you understand something? You might say, "Sure, because those tests test for understanding." But here's where things get really interesting.

Research indicates that most students in most schools, including our best students in our best schools, do not really understand. And you say, "What? The students who get A's, who get good scores on the College Boards, and who go to Ivy League schools don't understand?"

Let me give an example from the sciences. When you ask students who get very high grades and go to very good colleges to explain a physical phenomenon, not only can they not explain it but they actually give the same sort of explanations that four- and five-year-olds give.

In mathematics, kids learn how to plug numbers into a formula, but when you give them a problem they have not seen before, most students do not know how to use the formula to solve the problem. In the social sciences, arts, and humanities, a student mat well be able to express a complex phenomenon they have encountered in school or a text, but when something complex happens in the real world, they give very simplistic explanations.

This is where my definition of understanding comes in. I consider an in-

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dividual to have understood when he or she can take knowledge, concepts, skills, and facts and apply them in new situations where they are appropriate. If students simply parrot back what they have been told or what they have read in a textbook, then we do not really know whether they understand.

We can only really determine whether a student understands when we give the student something new and they can draw upon what they have learned to help answer a question, illuminate a problem, or explain a phenomenon to someone else.

Where do students get these simplistic notions about their world?

Gardner: They get them pretty much on their own by being human beings, by having brains, and by trying, during their early years, to make sense of the world. Kids develop very powerful theories about the world when they are young—theories about matter, mind, and life. A theory about matter, for example, is that sweaters keep you warm so they must have warmth in them. But when you leave a sweater outside, it stays cold.

"Many of a child's theories are totally intuitive..."

Many of a child's theories are totally intuitive and totally wrong. They are developed without a lot of help, without a lot of teaching. And that is what I call the "unschooled mind," the mind that is developed without any formal education. It is a wonderful mind. However, if all of these ideas were correct, we would never have had to develop disciplines or teach children new things because they would come to school entirely equipped.

How do teachers and administrators take the unschooled mind and help the child understand the world and the way people are?

Gardner: According to the work I have done, these early theories are deeply engraved into our mind. Because many of them are wrong, the purpose of school ought to be to change the engraving so that it is more accurate. Instead what happens is that the engraving gets covered with a very fine powder—the stuff that school is trying to teach.

If you peek into the mind in school, it looks pretty good because you just see the powder. But beneath the powder, the engraving is unaffected. And when you leave school and slam the door for the last time, the powder blows away and the initial engraving is still there. In other words, the unschooled mind is relatively unaffected by school once the individual gets out of the school context.

Howard Gardner with son Benjamin.
Photo by Rick Friedman/Black Star

Although we need teachers and textbooks, they often are not enough. Unless you really confront students' notions about the world and figure out why they believe these theories and what could convince them they are wrong, they will continue to hold onto those ideas.

And so you can simulate things. You really have to help kids challenge the ideas they have. If you leave a sweater outside every day of the year and have kids take the temperature of the sweater everyday, that is going to affirm the notion that the sweater is not inherently warm. You take their stereotypical ways of thinking very seriously, recognize their misconceptions, and deal with them directly.

Are there other ways?

Gardner: There are. These include two institutions I am very interested in. One is an old institution—the apprenticeship. The other is a new institution—the children's museum.

Now I'm not talking about the surface features of apprenticeships and children's museums—with apprenticeships, seven years of indenture and sweeping the floor, or with children's museums, a place you go to on weekends to see big fountains and eat ice cream. I'm talking about the educational wisdom that is embedded in each of these institutions.

In an apprenticeship, you hang around somebody who is an expert, a mentor. You see that person use his or her knowledge in action everyday. Here is where we can get into the marrow of schools.

And what about the educational wisdom embedded in children's museums?

Gardner: What's amazing about children's museums is that you can take kids who seem like total dolts in school and put them in children's museums and suddenly they become very intelligent. They inquire, explore, experiment. They learn things, approach things in their own way, and do their own kind of reflection about what is going on.

I've seen 50 to 60 kids totally engaged and working in a children's museum without any adult around. You don't often see that sort of thing in schools.

Both apprenticeships and children's museums suggest that students go outside the traditional school setting. How can we bring more of this type of learning into the classroom?

Gardner: It's really bringing the habit of mind and the practices associated with those institutions closer to classrooms. If teachers think of themselves as role models—actually using the literacies of their discipline, thinking historically, and carrying out experiments—kids will see that what they are learning really does have a use.

The single most important thing that a superintendent, principal, or teacher can do is to show that learning

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and knowledge and understanding are important to them. If they can do that, they have crossed the most important river. And if they do not have the time to do that, they are destined to fail in the area of genuine understanding, no matter how clever they are and how good they are with budgets. If they do not communicate that learning and understanding are central, they cannot possibly be effective.

So administrators and teachers can serve as experts in learning for the apprentice student?

Gardner: Yes, but it's not that important that the teacher be the total expert. Teachers shouldn't feel badly if they don't know all the answers. They should feel badly if they cut off the questions.

Children learn a lot when teachers say they don't know—as long as teachers also ask questions, such as how can we figure this out, who can we go to, where could we look it up? What is important is that the teacher, at his or her level of understanding, demonstrate how to learn and use what he or she has learned.

Let's turn the tables a bit. You have talked about how children develop flawed theories about how the real world works. What are some of the flawed theories about schools, about how children develop and how they learn?

Gardner: Everybody—you, I, administrators, and teachers—has flawed notions about school. Perhaps the most profound one is that school has to be the way we adults remember it. Most people feel that if they sat still with worksheets in front of them and handed work in on time, then that's the way school should be.

I'm not saying schools like that are necessarily disastrous, but I can say with great confidence that this type of learning doesn't work any more.

Another flawed notion is that the teacher is the person who is smart and has all the knowledge and the child is an empty vessel in whom that knowledge is poured. Still another is that kids are bright or dumb. They are born that way and there isn't much you can do about it. The purpose of school, then, is to figure out who the bright ones are and push them through as quickly as possible and to sort out the dumb ones because you really can't do much about them.

And then there's the notion that you have to control things at all times, and that kids have to be kept down because as soon as you turn your back, they'll throw something at you.

You said that some of these flawed notions play out in the ways children are labeled as being smart or dumb. How does your theory of multiple intelligences counter such labels?

Gardner: The notion of intelligence as being a single thing is actually less than 100 years old, but it has exerted enormous influence in this country and others as well.

My research led me to a different perspective. I observed that with both children and brain-damaged patients, strength in one area simply did not predict strength in another area. If I tell you, for example, that somebody is good in music, you can't tell me whether or not he or she will be good with language or science or understanding other people.

My argument is that in evolution we have developed a brain and a mind that can analyze lots of different information. And while every brain and mind can do that, probably no two brains and minds have exactly the same configurations of intelligences.

What does this mean for school?

Gardner: What we have been doing is to teach and assess everybody as though each has the same kind of mind. In school, we appeal to people who have what I call a blend of superficial language and logic—people who are quick and glib and who can talk fast and reason pretty well.

As long as these people stay in school, they do well. But once they walk out into the street, they discover that the skills they have are really not any more essential than other skills for surviving in the world.

If you take the notion of individual differences and multiple intelligences seriously, you have to ask several questions: What curricula do we offer kids? To what extent do we try to configure curricula to children's ways of learning? What kind of assessments should we use to find out whether kids really understand?

There's no reason why everyone has to learn history or math in the same way. And there is no reason why we have to be assessed in the same way. We have different kinds of minds. If I understand a mathematical principle and I can show you it one way, it's really not important that I show it to you in another way.

How can schools test for and appeal to so many different intelligences?

Gardner: A lot of intelligences really can't be tested for, in the sense we usually use the word "test." What we need to do is to create school environments where you can observe a lot about what kids are good at, what interests them, and where they show substantial growth—environments that, in many respects, resemble children's museums.

Where might school administrators and teachers start?

Gardner: Within the educational context, I believe we need to start with the child's strengths. If a child is afraid of a particular area or not very good in an area, the best way to work with that child is to use an area of strength as an entry point.

This not only increases the chances that the child will find some way to the concept—after all, there are many windows in the same room—but, at the same time, it gives the child a sense of what it means to be an expert because an expert is able to think about things in more than one way.

We also might begin to observe children when they are young and share our observations with the children, their parents, and subsequent teachers. In the end, however, we have to be responsible for our own education, and this means knowing what sorts of things we are good at and how we learn best.

Are there model schools that are successfully implementing these practices?

Gardner: There is the Key School in Indianapolis, which is organized around the idea of multiple intelligences. One thing that excites people about the Key School is that the children there are very metacognitive. The children say, "Well, I learn about stuff in this way." They get very angry when the teacher insists on doing things only his or her way.

Another example is a high school in East Harlem in New York City. The kids, who have had many strikes against them, are learning a progressive curriculum and working hard. Graduation is by exhibition, not by test scores. Eighty percent of the kids graduate and go on to colleges.

We also have a new project, currently funded by the New American Schools Development Corporation, called ATLAS, (Authentic Teaching, Learning, and Assessment for all Students). It is a consortium among Ted Sizer's Coalition of Essential Schools at Brown University, Jim Comer's School Development Program at Yale University, the Education Developmental Center in Newton, Mass., which is run by Janet Whitla, and my own group at Harvard, Project Zero.

How does ATLAS propose to restructure schooling?

Gardner: At the very center of ATLAS is the child. Education is personalized and makes sense to the child. Students graduate not because of Carnegie units but because they can exhibit knowledge and understanding of what is important.

The curriculum grows out of essential questions human beings have asked since the beginning of time. The focus is on uncoverage—not coverage. Less is more, so kids can go into things deeply.

Also at the center are authentic learning experiences. These are practices that aren't done just to satisfy a state requirement or because it was done to you, but rather practices that you can justify because kids are going to learn from them. It's very important in ATLAS schools that you have flexible policies so that experimentation is allowed.

In the very early stage of developing an ATLAS school, we emphasize the creation of organizational management structures where everybody in the community who has a stake in
the school gets together and talks a
argues and reaches a consensus, wi
out blame, about what the importa
things in the school are, about how
achieve them, and about how to ma
sure everybody is on board.

**What can superintendents, principal
teachers, and parents do to cultiva
authentic learning and genuine u
derstanding in their own schools?**

Gardner: It's easy to sit at Harva
and tell everybody else what to d
I'm mindful of the enormous pro
lems faced by so many teachers a
administrators. They are proble
that I frankly would not know how
handle.

That being said, I don't think the
is any way for people in Americ
schools today to be successful unle
they are focused on the education
kids. Schools have to decide what
leave out, what's not importa
what's the bonus you can do later, a
then really focus on what I call t
meat and potatoes. This means tac
ling important questions and reac
ing deep understanding.

If people don't want understan
ing, they have no reason to defe
what they are doing except to say th
are keeping kids off the streets. A
since shootings go on in schools, to
keeping kids off the streets is not su
a huge deal.

Once you decide that understan
ing is your focus, then how you thi
about everything changes, includi
the notions of curriculum and cov
age. Understanding takes time, a
the greatest enemy of understandi
is coverage. If you are determined
cover everything, you guarantee th
most kids will not understand.

I find it incredible that we have
many educational leaders—fro
chief state school officers to gove
nors to presidents to secretaries of e
ucation—and none of them tal
about what seems to be the most el
mentary thing: If kids don't unde
stand, then what are we doing?

*Elizabeth Steinberger is a free-lanc
writer and educational researcher base
in Leesburg, Va. The complete interview
with Howard Gardner is available on
audiocassette for purchase. To order
see the reply card within this article.*

TEACHING FOR MULTIPLE INTELLIGENCES

With
David G. Lazear

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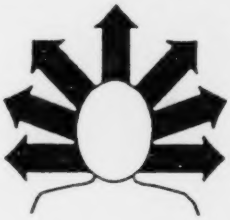
What is intelligence? (a working definition)

"An intelligence entails the ability to solve problems or fashion products that are of consequence in a particular cultural setting. The problem-solving skill allows one to approach a situation in which a goal is to be obtained and to locate the appropriate route to that goal. The creation of a cultural product is crucial to capturing and transmitting knowledge or expressing one's views or feelings. The problems to be solved range from creating an end to a story to anticipating a mating move in chess to repairing a quilt. Products range from scientific theories to musical composition to successful political campaigns."

(from *Frames of Mind*
by Howard Gardner)

TEACHING FOR MULTIPLE INTELLIGENCES

Awareness Agenda



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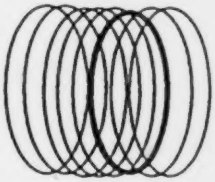

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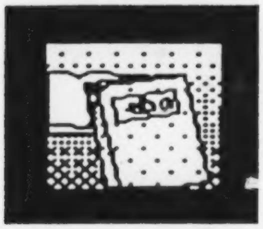
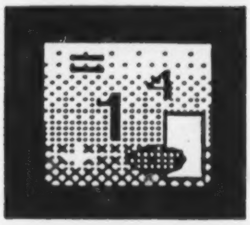


VERBAL/ LINGUISTIC INTELLIGENCE

Verbal/linguistic intelligence is responsible for the production of language and all the complex possibilities that follow, including poetry, humor, storytelling, grammar, metaphors, similes, abstract reasoning, symbolic thinking, conceptual patterning, and of course, the written word. Verbal/linguistic intelligence is awakened by the spoken word; by reading someone's ideas or poetry; and by writing one's own ideas, thoughts, or poetry.

To activate this intelligence:

- Read a story you enjoy and write your own sequel—"What happens next?"
- Listen to someone expound on their ideas and have a discussion with them.
- Learn the meaning of one interesting, new word each day and practice using it.
- Make a speech on a topic about which you have a great deal of interest and excitement.
- Keep a journal or log in which you write your reflections about events from the day.



LOGICAL/ MATHEMATICAL INTELLIGENCE

Logical/mathematical intelligence is most often associated with what we call "scientific thinking." Logical/mathematical intelligence is activated in situations requiring problem-solving or meeting a new challenge. This intelligence likewise involves the capacity to recognize patterns, to work with abstract symbols such as numbers and geometric shapes, and to discern relationships and/or see connections between separate and distinct pieces of information.

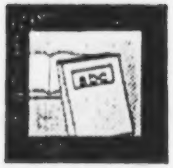
To activate this intelligence:

- Create a four-point outline on your hobby with each point having four subpoints, and each subpoint having four more subpoints.
- Practice analytical thinking by comparing and contracting two objects; for example, five unique characteristics of a typewriter, five of a computer, and five the two objects have in common.
- Create a convincing, rational explanation for something that is totally absurd; for example, the benefits of the square basketball.
- Participate in a project requiring the use of the "scientific method." If you are *not* a cook, try making brownies from scratch following a recipe.

Verbal/linguistic and logical/mathematical intelligence form the basis for all current intelligence tests, standardized achievement tests, and college entrance examinations used in all Western systems of education.

Logical/Mathematical Intelligence

Often called "scientific thinking" this intelligence deals with deductive thinking/reasoning, numbers and the recognition of abstract patterns.



Verbal/Linguistic Intelligence

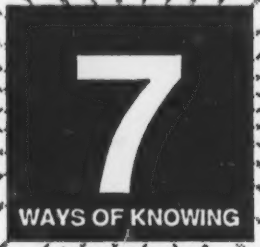
Related to words and language, both written and spoken. This form of intelligence dominates most Western educational systems.

Visual/Spatial Intelligence

The intelligence which relies on the sense of sight and being able to visualize an object and the ability to create internal mental images/pictures.

Intrapersonal Intelligence

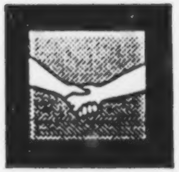
The intelligence which relates to inner states of being, self-reflection, metacognition (i.e. thinking about thinking) and awareness of spritual realities.



MULTIPLE
INTELLIGENCE

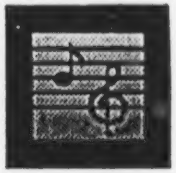
Body/Kinesthetic Intelligence

Related to physical movement and the knowings/wisdom of the body, including the brain's motor cortex which controls bodily motion.



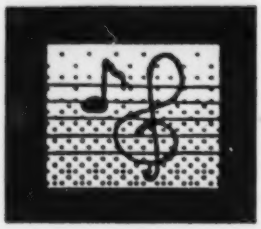
Interpersonal Intelligence

The intelligence which operates primarily through person-to-person relationships and communication. It relies on all the other intelligences.



Musical/Rhythmic Intelligence

The intelligence which is based on the recognition of tonal patterns, including various environmental sounds and on a sensitivity to rhythm and beats.

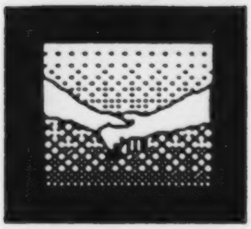


MUSICAL/ RHYTHMIC INTELLIGENCE

This intelligence includes such capacities as the recognition and use of rhythmic and tonal patterns, and sensitivity to sounds from the environment, the human voice, and musical instruments. Many of us learned the alphabet through this intelligence and the "A-B-C song." Of all forms of intelligence identified thus far, the "consciousness altering" effect of music and rhythm on the brain is the greatest. Just think of how music can calm you when you are stressed, stimulate you when you're bored, and help you attain a steady rhythm in such things as typing and exercising. It has been used to inspire our religious beliefs, intensify national loyalties, and to express great loss or intense joy.

To activate your musical/rhythmic knowing:

- Listen to different kinds of music to shift your mood; for example, play relaxing, instrumental music before or during a stressful, anxiety-producing activity (such as taking a test).
- Use singing to express an idea (even in the shower!). Use a popular tune and create a simple song about your family.
- Hum to create different kinds of vibrations inside of your head; for example, try the vowels one at a time, using different volumes and pitches.
- Play tapes of various sounds from nature (such as the ocean tides, a water fall, the wind blowing, and animal sounds). Ask yourself what you can learn from the rhythms and patterns of nature.

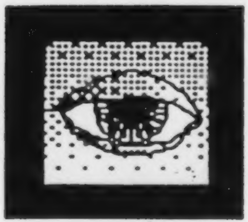


INTERPERSONAL INTELLIGENCE

Interpersonal intelligence involves the ability to work cooperatively in a group as well as the ability to communicate, verbally and non-verbally, with other people. It builds on the capacity to notice distinctions among others; for example, contrasts in moods, temperament, motivations, and intentions. In the more advanced forms of this intelligence one can "pass over" into another person's life context (that is, "stand in their shoes", so to speak) and read their intentions and desires. One can develop genuine empathy for another's feelings, fears, anticipations, and beliefs.

To awaken this intelligence:

- Get into different structured situations in which reliance on other people is required for the successful completion of a project (such as any kind of team activity or committee work).
- Practice listening deeply and fully to another person. Cut off the "mind chatter" that usually occurs when you are listening to someone else talk, and stay focused only on what they are saying.
- Try to guess what someone else is thinking or feeling based on various non-verbal clues, then check your accuracy with that person.
- Explore different ways to communicate with someone else; for example, facial expressions, body posture, gestures, sounds (including but not limited to spoken words).



VISUAL/ SPATIAL INTELLIGENCE

Visual/spatial intelligence deals with such things as the visual arts (including painting, drawing, and sculpture); navigation, map-making and architecture (which involves the use of space and knowing how to get around in it); and games such as chess (which requires the ability to visualize objects from different perspectives and angles). The key sensory base of this intelligence, obviously, is the sense of sight, but also the ability to form images and pictures in the mind. Our childhood day-dreaming, when we pretended we could fly or that we were magical beings, or maybe that we were heroes/heroines in fabulous adventure stories, used this intelligence to the hilt!

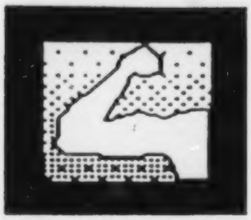
To catalyze your visual/spatial intelligence:

- Work with "artistic media" (such as clay, paints, colored markers, and pens) to express an idea or opinion; for example, what you think the 21st Century will be like.

- Do intentional day-dreaming; for example, dream about the ideal vacation spot with as much visual detail as you can muster.

- Practice internal imagination exercises—visualize yourself in a different period of history or have an imaginary conversation with your hero/heroine, a character from literature, or an historical figure.

- Use various "design skills" such as drawing, architecture, diagrams, or creating a poster to convey your ideas or thoughts to others.



BODY/ KINESTHETIC INTELLIGENCE

Body/kinesthetic intelligence is the ability to use the body to express emotion (as in dance and body language), to play a game (as in sports), or to create a new product (as in devising an invention). Learning by doing has long been recognized as an important part of education. Our bodies are very wise. They know things our conscious minds don't and can't know in any other way. For example, if I gave you a piece of paper and asked you to lay out the keyboard of the typewriter **without moving your fingers**, could you do it? Probably not. But your fingers know the keyboard without even pausing.

To call this intelligence to the fore:

- Perform a dramatic enactment; "role play" an idea, opinion, or feeling. Play charades using current events or modern inventions.

- Play non-competitive games that involve physical activity and a lot of motion; for example, learn the names of everyone in the room through physical gestures.

- Practice activities that require physical activity such as folk dancing, jogging, swimming, and walking. Try walking in different ways to match or change your mood.

- Carefully observe yourself involved in everyday physical tasks such as shoveling snow, washing dishes, or fixing your car. Become aware of what your body knows and how it functions.

NOTES ON
LEFT BRAIN/RIGHT BRAIN

Probably the most popular and widely known finding of contemporary brain research is that our brains have at least two very different ways of processing information. These are connected with the two hemispheres of the brain—the left and the right. One or the other of these sides tends to be dominant in each of us.

The **left brain's** processing is more analytical, linear, and step-by-step: for example, when you're trying to figure our what happened to all your money as you balance your checkbook! The left brain's information processing mode is more verbal, rational, and logical than the right.

The left brain tends to organize new information into pre-existing knowledge patterns, categories, and schemes. This is like a very meticulous person who is forever looking for little boxes on shelves to put things into so they'll make sense and the house will be neat and tidy.

The **right brain's** processing tends to be more integrating, simultaneous, and all-at-once: for example, the experience you have when one of your favorite songs plays on the radio, or you are looking at a magazine and suddenly turn the page to a picture of your ideal vacation spot! The right brain is more visual, spatial, symbolic, and aesthetic in the way it processes information.

The right brain can create leaps in knowing for its vision is panoramic; it can see the larger patterns of things. It can invent ideas that don't fit into any pre-existing pattern or scheme and for which there is not even any previous reference point or experience. This is much like the artist or science fiction writer who creates worlds and universes no one has ever seen but in their dreams, or the musician who evokes deep emotions by putting together various musical tones and patterns.

An edge in current "split brain" research is the integration of the two sides of the brain into a unified whole—**the whole brain.** When this balancing occurs, we begin to participate in a greatly amplified approach to living. For in addition to so-called "hardheaded," rational thinking about our problems and concerns, the realm of intuition, symbols, and the aesthetic joins with our more analytical skills, giving us a deeper, richer experience of being.

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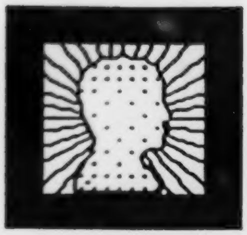


INTRAPERSONAL INTELLIGENCE

Intrapersonal intelligence involves knowledge of the internal aspects of the self such as knowledge of feelings, the range of emotional responses, thinking processes (metacognition), self-reflection, and a sense of or intuition about spiritual realities. Intrapersonal intelligence allows us to be self-reflective; that is, to step back from ourselves and watch ourselves as an "outside observer." Our self-identity and the ability to transcend the self are part of the functioning of intrapersonal intelligence. It likewise involves our capacity to experience unity, to discern patterns of our connection with the larger order of things, to perceive higher states of consciousness, to experience the lure of the future, and to dream of and actualize heretofore unrealized potentials in our lives.

To activate intrapersonal intelligence:

- In the midst of a routine activity practice acute mindfulness; that is, an intense awareness of everything going on, thoughts, feelings, physical movements, and inner states of being.
- Practice watching your thoughts, feelings and moods as if you were a detached, outside observer. Notice patterns that kick into gear in certain situations; for example, the "anger pattern," the "playfulness pattern," or the "anxiety pattern."
- Objectify your various thinking strategies and patterns, such as your problem-solving strategies, your crisis-thinking modalities, and your processes for analytical thinking.
- In 25 words or less write your answer today for the question "Who am I?" Keep working on it until you are satisfied. Look at it again each day for a week, making revisions that you feel are needed.

VERBAL/LINGUISTIC

- Reading
- Vocabulary
- Formal Speech
- Journal/Diary Keeping
- Creative Writing
- Poetry
- Verbal Debate
- Impromptu Speaking
- Humor/Jokes
- Storytelling

LOGICAL/MATHEMATICAL

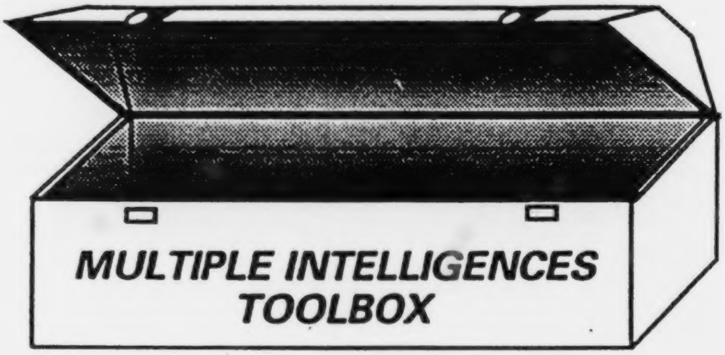
- Abstract Symbols/Formulas
- Outlining
- Graphic Organizers
- Number Sequences
- Calculation
- Deciphering Codes
- Forcing Relationships
- Syllogisms
- Problem Solving
- Pattern Games

VISUAL/SPATIAL

- Guided Imagery
- Active Imagination
- Color Schemes
- Patterns/Designs
- Painting
- Drawing
- Mind-Mapping
- Pretending
- Sculpture
- Pictures

BODY/KINESTHETIC

- Folk/Creative Dance
- Role Playing
- Physical Gestures
- Drama
- Martial Arts
- Body Language
- Physical Exercise
- Mime
- Inventing
- Sports Games



MUSICAL/RHYTHMIC

- Rhythmic Patterns
- Vocal Sounds/Tones
- Music Composition/Creation
- Percussion Vibrations
- Humming
- Environmental Sounds
- Instrumental Sounds
- Singing
- Tonal Patterns
- Music Performance

INTERPERSONAL

- Giving Feedback
- Intuiting Others' Feelings
- Cooperative Learning Strategies
- Person-to-Person Communication
- Empathy Practices
- Division of Labor
- Collaboration Skills
- Receiving Feedback
- Sensing Others' Motives
- Group Projects

INTRAPERSONAL

- Silent Reflection Methods
- Metacognition Techniques
- Thinking Strategies
- Emotional Processing
- "Know Thyself" Procedures
- Mindfulness Practices
- Focusing/Concentration Skills
- Higher-Order Reasoning
- Complex Guided Imagery
- "Centering" Practices

DIFFERENT KINDS OF SMART

By Susan Black

Not everyone is smart in the same way, says Harvard's Howard Gardner, whose theory of multiple intelligences could change your schools

HOWARD GARDNER HAS TWO DREAMS: THE first is for schools to do away with testing and assess children in more natural ways; the second is for society to recognize a full range of intelligences.

Gardner, a researcher in cognitive development at Harvard University, has become a source of inspiration, guidance, and knowledge for many educators who are tussling with tough questions about the nature of intelligence and how it can be measured. Already, many schools are replacing standardized tests with "authentic assessments," using portfolios—collections of students' real work—to determine achievement and progress. (See the February 1993 Research Report, "Portfolio Assessment.")

But getting schools to recognize "a full range of intelligences"—and then change educational practice to promote children's multiple intelligences—appears to be a much more complex and formidable endeavor.

Gardner's theory of multiple intelligences posits that individuals (with the exception of those who are brain-damaged or otherwise severely impaired) are intelligent to some degree in each of the following areas: linguistic, musical, logical-mathematical, spatial, bodily-kinesthetic, interpersonal, and intrapersonal (see the box on page 25). What's more, Gardner claims, with good teaching, individuals can develop, can actually get smarter, in each of these seven intelligences.

***Susan Black** is an education consultant who lives in Hammondsport, N.Y.*

Some schools are taking this theory to heart, but it isn't easy going. "The question is whether we should level our school and start from scratch," says a principal who intends to lead his K-6 elementary building toward a multiple-intelligence approach, "or whether we should take the slow route—one stepping stone at a time."

The limits of IQ

Whether you undertake radical reform or move cautiously in piecemeal fashion toward promoting a spectrum of intelligences, you must deal with some inescapable issues. One is the solid grip of standardized tests—especially when they're used to determine students' IQ.

So pervasive are the tests that supposedly measure and quantify students' intelligence that many schools would be lost without them. Without test data for evidence, how would schools know, for instance, where to place kindergartners? How would schools assign students to programs for the gifted? Who would be routed to special education classes? Which students would be counseled to go on to college, and which students would be told they should settle for vocational training?

In Gardner's ideal school, students wouldn't be categorized or labeled according to machine-scored, paper-and-pencil tests. Such tests, according to Gardner and his research colleagues at Harvard, are useful for one purpose and one purpose only: They predict children's success *in school*. Administering standardized tests to sixth-graders will, for instance, provide a fairly accurate

Illustrations by Randy Lyhus

picture of how they'll achieve in junior high. But, according to Gardner and other researchers, schools misuse tests when they use scores to slot kids into ability groups. It's especially unconscionable, they say, to use test scores to place a ceiling on some students' dreams for the future.

Why are IQ tests so limited? For one thing, the test items restrict students to using only what Gardner terms their logical-mathematical and linguistic skills. In fact, Gardner and other critics argue, IQ tests virtually ignore other traits in which many students excel—such as creativity in art or music, dexterity in mechanical or athletic areas, and sensitivity and caring toward others.

For another thing, standardized tests don't take into account such factors as motivation and effort (what some researchers call "task commitment"), which often drive brilliant achievement.

And, Gardner contends, schools doubly fail students by refusing to acknowledge talents and propensities that aren't considered "academic." The first blow is denying students a chance to develop all of their intelligences while they're in school; the second is preventing many from discovering and mastering talents, such as negotiating, which could benefit society.

Putting the theory to work

Schools that take Gardner's theories of multiple intelligences to heart are mapping out new strategies for teaching and learning. In the Key School in Indianapolis—an elementary school begun some seven years ago by a group of enterprising teachers—the staff works at promoting each student's range of abilities. In line with Gardner's theory, teachers provide opportunities for students to explore their seven intelligences. Teachers encourage students to use their strongest domains but help them develop their less dominant abilities.

Perhaps the commitment to helping students discover and develop untapped intelligences is most apparent in the school's Flow Room, a center every student attends at least three times a week. There, guided by clear rules and regulations, and supervised by a skillful teacher, students choose "flow activities" such

THE SEVEN INTELLIGENCES

Intelligence	**End States**	**Core Components**
1. Logical-mathematical	Scientist, mathematician	Sensitivity to, and capacity to discern, logical or numerical patterns; ability to handle long chains of reasoning.
2. Linguistic	Poet, journalist	Sensitivity to the sounds, rhythms, and meanings of words; sensitivity to different functions of language.
3. Musical	Composer, violinist	Ability to produce and appreciate rhythm, pitch, and timbre; appreciation of the forms of musical expressiveness.
4. Spatial	Navigator, sculptor	Capacity to perceive the visual-spatial world accurately and to perform transformations on one's initial perceptions.
5. Bodily-kinesthetic	Dancer, athlete	Ability to control one's body movements and to handle objects skillfully.
6. Interpersonal	Therapist, salesperson	Capacity to discern and respond appropriately to the moods, temperaments, motivations, and desires of other people.
7. Intrapersonal	Person with detailed, accurate self-knowledge	Access to one's own feelings and the ability to discriminate among them and to draw upon them to guide behavior; knowledge of one's own strengths, weaknesses, desires, and intelligences.

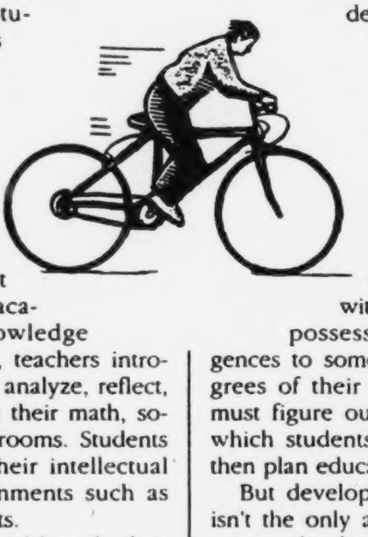
Source: Gardner, Howard, and Hatch, Thomas. "Multiple Intelligences Go to School: Educational Implications of the Theory of Multiple Intelligences." New York: Center for Technology in Education, 1990. ERIC Document No. ED 324366.

as board games, puzzles, books, and toys for free-play time. (Some students might also bring in hobbies—such as kits for building model airplanes—from home.)

But playtime in the Flow Room isn't just a recess period for letting off steam or burning up energy. Here play is serious business—so much so that teachers record students' choices and behavior on observation charts. Data on the students' activities help teachers interpret the children's talents and skills; the records also become part of students' academic profiles and portfolios and are used to plan and design classroom learning activities.

Other pilot programs are under close supervision and direction from Howard Gardner and his colleagues. Project Spectrum, for example, is studying cognitive strengths and capabilities of preschoolers in and around Boston. Spectrum researchers are assembling profiles of students' talents and skills as they observe carefully constructed opportunities—both in free-play activities and in classroom instruction—for students to experiment with each of the seven multiple intelligences.

Another pilot program is Arts PROPEL, a collaborative project with Educational Testing Service and the Pittsburgh Public Schools. This program follows middle and high school students through three forms of artistic expression—imaginative writing, music, and visual arts—to determine how students learn and how their achievement can be assessed. Rather than concentrating on students' finished products as evidence of learning, researchers are looking at "process-folios," which document students' work on artistic productions over time. In line with developing students' multiple intelligences, teachers encourage students not only to create art but to critique, reflect, and judge artistic expression.



The Practical Intelligence for School (PIFS) project, undertaken jointly by Howard Gardner and Robert Sternberg of Yale, targets middle school students in urban Massachusetts schools and rural Connecticut schools. To help students integrate academic knowledge and practical knowledge about themselves and how they learn, teachers introduce lessons designed to help students analyze, reflect, and understand the ways they learn in their math, social studies, science, and English classrooms. Students are asked to identify and then use their intellectual strengths and abilities to tackle assignments such as writing essays or conducting experiments.

Aside from such closely supervised and heavily documented projects as these, teachers here and there are experimenting with Gardner's theories in their own classrooms. In Richmond, Ky., for example, Debbie Brown incorporates multiple-intelligence theories in her nongraded primary class by giving young students lots of flexibility in how they approach solving problems. One student, Brown notes, had considerable difficulty writing out answers to assignments, but that same student did beautifully when he drew pictures to illustrate his answers.

Now Brown has students work at a variety of centers she's designed to let students explore their different intelligences. The centers, spread throughout her classroom, encourage students to learn about curriculum themes—one such theme is on trees—in creative and unusual ways. Students at one center might map out locations where certain tree species are found, while students at another center design an art portfolio for the class leaf collection.

Schooling children's minds

Gardner describes intelligence as the capacity to solve problems or to fashion products that are valued in one or more cultural settings. It's a definition that challenges schools to rethink and reconceptualize students' abilities and talents. Once students leave school, how far will mathematical and linguistic skills take them? How many careers or other endeavors (such as serious hobbies or avocations) depend on the knowledge a person gains from spending 12 years in school?

To Gardner, much of what passes for serious academic learning in school is simply a barrier that keeps many individuals from putting their inherent intelligences to good use. After years of memorizing facts—imports and exports of countries, names of inventors, dates of world events—students have little more than a repertoire of trivia. Simply having at hand a body of facts—no matter how impressive—is no assurance a person will ever apply that information to solve problems or fashion products that are useful. In other words, most schooling doesn't empower students to act on their intelligences. Sadly, many students leave school thinking it was a waste of time. And for many, it was just that.

Still, some students who cruise along through school without getting much notice for special gifts or talents excel once they're out in the "real world"—just as some brilliant students seem to vanish after high school. What schools need to reckon with, maintains Gardner, is that all students possess each of the seven identified intelligences to some extent, but the combinations and degrees of their intelligences are all different. Schools must figure out which students are "at promise" and which students are "at risk" in each intelligence and then plan education programs accordingly.

But developing every child's array of intelligences isn't the only agenda Gardner presents to schools. He wants schools to come to grips with the misinformation most students carry around in their heads—misinformation that often lasts a lifetime and gets in the way of real learning and understanding. His studies in cognitive development show how ineffective schools are at transforming children's earliest mind-sets—kids' intuitive thinking—about how the world seems to work.

Gardner says schools fail to appreciate that in nearly every student there is the "mind of a 5-year-old struggling to get out." But despite schools' efforts to give students facts that contradict their intuitive (and erroneous) thinking, the intuitive views still stick in students' minds. In fact, Gardner's research shows, schools fail miserably at changing children's understandings. Even college students, he points out, persist at incorrectly interpreting the change of seasons or the laws of motion; despite years of explanations in science courses, they cling to the explanations they developed in early childhood.

To school children's minds, Gardner encourages teachers to help students move from being intuitive learners (preschoolers to about first-graders), to being traditional learners (generally, second-graders to high school graduates), to becoming disciplinary experts who demonstrate mastery in specific areas and who can apply knowledge to new situations. To that end, Gardner recommends that schools set up cognitive apprenticeships so students can study and learn from practicing professionals and experts. Along the way, he says, schools need to help students set aside their original naive understandings—their 5-year-old minds—and move on to more sophisticated knowledge.

Gardner also believes schools should nurture children's interests and abilities, giving students plenty of enrichment and learning opportunities so that they might discover their passion. As an example, Gardner cites Yehudi Menuhin, who was so enchanted with the sound of the violin at a concert that, at age 3, he insisted on getting his own violin; from then on, Menuhin's musical genius was stimulated for a lifetime.

To increase the likelihood that students will encounter such "crystallizing experiences"—events that forcefully shape their futures—schools need to provide opportunities to work with different materials, equipment, and people. Consider how studying cells under a microscope might capture the imagination and the mind of a future microbiologist, or how studying architectural styles might trigger a student to become a leader in historical preservation. Such connections aren't far-fetched, as Gardner's research shows and as many talented and productive adults testify.

Schools also need to provide systematic learning in the symbols (Gardner calls them "notational systems") used in various disciplines. To be successful in math, for instance, students need to master the notations used to represent functions; in music, they must learn how to interpret key signatures and all the other symbols used to translate written music to sound. The same is true throughout the curriculum—students need to learn how to unlock meaning from knowledge coded in notations and symbols.

Finally, Gardner urges schools to counsel students seriously about career possibilities. The purpose of school, Gardner says, "should be to develop intelligences and to help people reach vocational and avocational goals that are appropriate to their particular spectrum of intelligences." It's important, he argues, that schools help people feel more "engaged and competent, and therefore more inclined to serve society in a constructive way." And that, he says, might be the last best thing schools can do for students. ◆

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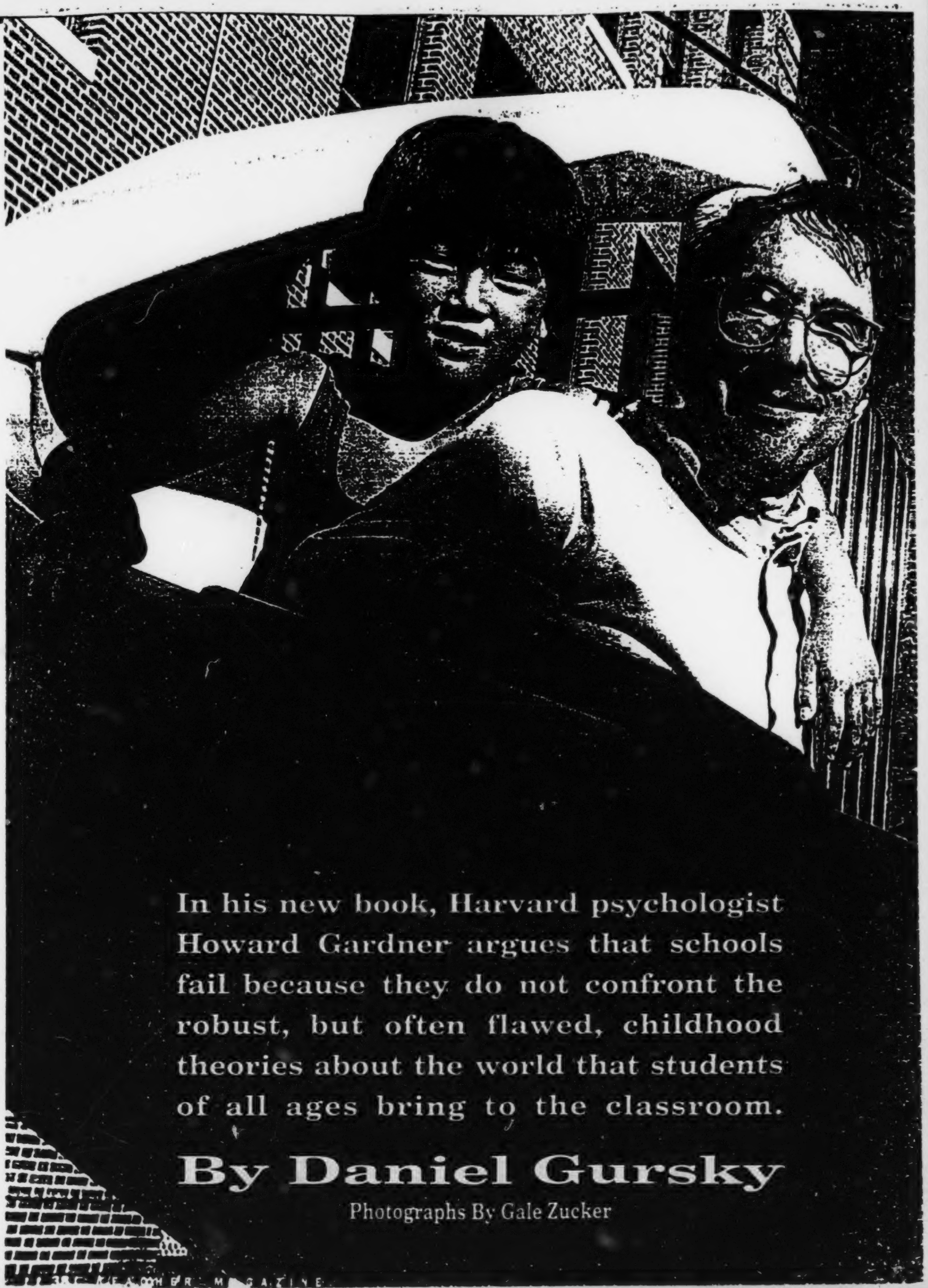
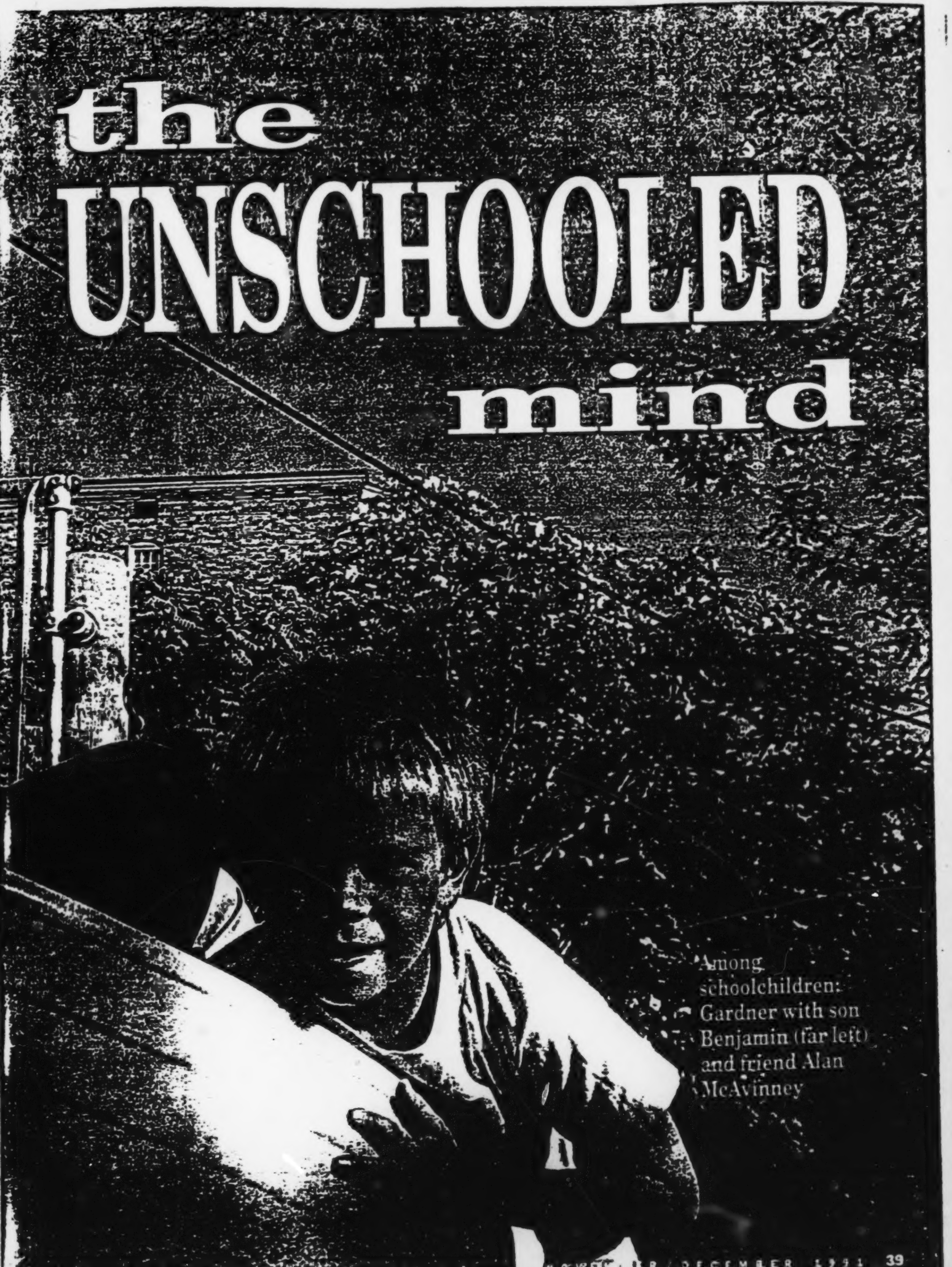


In his new book, Harvard psychologist Howard Gardner argues that schools fail because they do not confront the robust, but often flawed, childhood theories about the world that students of all ages bring to the classroom.

By Daniel Gursky

Photographs By Gale Zucker

the UNSCHOOLED mind



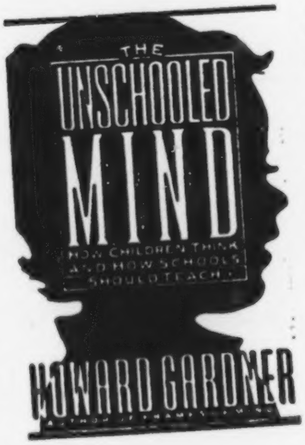
Among schoolchildren: Gardner with son Benjamin (far left) and friend Alan McAvinney

Ask a 5-year-old why it's hot in the summer, and he'll probably say it's because the Earth is closer to the sun. Ask a high school senior the same question, and the chances are you'll get the same answer. Both are wrong; seasons result from the angle of the Earth on its axis as it orbits the sun. The high school senior, like the 5-year-old, is responding on the basis of powerful, instinctive ideas about the world that everyone develops early in life. Through experience, the child learns that the closer one gets to a source of heat, the hotter it is; using a child's logic, the same must be true of the Earth and the sun.

Such intuitive thinking is fine for a preschooler, but not for a high school senior. Hasn't more than a decade of formal instruction made any difference in the student's thinking? Not as much as most people believe, nor as much as it should have, says Harvard University psychologist Howard Gardner. In his new book, *The Unschooled Mind: How Children Think and How Schools Should Teach* (Basic Books), Gardner argues that inside every student—indeed, inside every person—there's a 5-year-old "unschooled mind" struggling to express itself.

"Just as Freud stressed the degree to which the adult personality harbors within it the complexes and strivings of the Oedipal child," Gardner writes, "I maintain that students (and non-students) continue to be strongly affected by the practices, beliefs, and understandings of the 5-year-old mind."

Children, Gardner explains, come to school with robust, but often flawed, theories about themselves, about other people, and about the world. Instead of challenging and building on these theories, schools ignore them and proceed to teach a new set. Even though these theories may be contradictory, they can coexist in the child's mind. In school, the student may be able to feed back information to the teacher on request, using the theories taught in the classroom, but the flawed ideas haven't been abandoned. As a consequence, Gardner argues, once outside the school, the student reverts to the theories of the 5-year-old mind when confronting new situations.



This startling theory is the latest work in Gardner's prolific and diverse career. He's best known for his theory of multiple intelligences, but his dozen books run the gamut from a psychology textbook to works on topics as varied as children's scribbling, brain damage, and China's educational system. Whatever the subject, his work attracts attention. And *The Unschooled Mind* promises to add more variety and complexity to the growing national debate about teaching and learning.

"I think Howard's one of the freshest, most original minds working in this area," says Jerome Bruner, a psychologist at New York University and one of Gardner's former teachers at Harvard. "His contributions have been major, not only by making us aware of the different forms of intelligence but also in terms of following through and coming up with interesting curricular ideas."

William Damon, chairman of Brown University's education department, expects *The Unschooled Mind* to have a powerful impact on education. "The book," he says, "is very innovative but at the same time very careful and responsible. It really sets out a new direction for how to approach education."

Gardner's Harvard office is a classic academic's space: crowded, strewn with papers, and dominated by large filing cabinets. The 48-year-old psychologist is dressed in the casual attire befitting a professor: light blue shirt with sleeves rolled up, olive-green pants, no tie.

Seated in a rocking chair in front of a computer, Gardner argues that the problems with schools are much more extensive than most educators realize. "While everybody knows there are problems with many schools," he notes, underscoring the point with broad hand gestures, "I think most people assume that our best schools are fine." Not so, he says. Even in schools with the highest test scores, students who master the material adequately enough to perform well in class and on exams don't really understand what they're being taught.

In *The Unschooled Mind*, Gardner writes about a phone conversation with his daughter, Kerith, that brought this point home. When Kerith—who had done well in high school physics—called from college, distressed about her physics class, Gardner offered some fatherly advice: Don't worry so much about the grade, he told her, just try to understand the material. "You don't get it, Dad," Kerith replied. "I've never understood it."

Kerith has plenty of company. Many top students at elite universities exhibit fragile understanding, at best. In one study Gardner cites, engineering students were asked, "What forces are acting on a coin tossed straight up that has reached the midpoint of its trajectory?" Some 70 percent of students who had taken a mechanics course answered, incorrectly, that two forces—gravity and the original force of the hand that tossed the coin—were at work. In fact, only gravity is present.

Such misconceptions about physics provide the most striking evidence of Gardner's thesis, but he spends a good deal of his new book detailing common—but incorrect—thoughts and stereotypes that show up in other academic disciplines, as well. In math classes, for example, most calculus students can competently plug numbers into equations, but even the best students flounder when problems are phrased a little differently or applied to real-life situations. In the humanities and social sciences, people tend to respond to issues on the basis of dominant images and stereotypes, even when faced with contradictory evidence. During the Persian Gulf war, Gardner points out, huge numbers of Americans saw the conflict solely in terms of good guys vs. bad guys, demonstrating the same level of sophistication as that of a young child watching a cartoon. In reality, the complex history, culture, and economics of the Middle East make such Hollywood-like analyses inadequate.

Why does this happen? Because the 5-year-old mind reasserts itself when a person confronts difficult questions outside school. "You should talk to 5-year-olds," Gardner says. "They're very smart. They've got very powerful theories about how the world works, and they've got very powerful theories about how people work. They're very serviceable theories." Unfortunately, however, they are often flawed.

The problem, Gardner says, is that schools ignore the strongly held notions of their young charges; teachers treat students as if their minds are empty and need to be filled with new information. "If you don't confront students' ideas and show where they're adequate and where they're inadequate, those ideas are going to remain there," he argues. "They're going to be ready to pounce like a Trojan horse as soon as the children escape from the schoolroom."

Gardner is distressed by the gap between teaching and understanding; he believes 'genuine understanding' should be the goal of education.

Every parent can cite examples of child logic. Gardner offers one from his 6-year-old son, Benjamin: "I can tell Benjamin that the Earth is round and he'll repeat that. But then, if I say, 'Where are you?' he'll say, 'I'm on the flat part.' Basically, he repeats the information, but he converts it to something that makes sense to him. The Earth doesn't look round to him."

Students of all ages do the same thing. They may be able to provide the expected response on homework or a test, but that rote answer offers no guarantee that they understand the material. This disparity between teaching and understanding distresses Gardner because he sees "genuine understanding"—understanding that goes beyond repetitive learning and short answers—as the fundamental goal of education. "No one ever asks the further question, 'But do you *really* understand?'" Gardner writes. "The gap between what passes for understanding and genuine understanding remains great."

Gardner doesn't hesitate to propose his own solutions for promoting genuine understanding. *The Unschooled Mind* goes beyond description and analysis; it outlines his most explicit prescription yet about how to reform schools. He proposes an education system suffused with individual and group projects, particularly apprenticeships and the hands-on experiences offered in children's museums, because he believes projects can restore the context sorely missing from students' school experience. As often as possible, Gardner asserts, students should work with and learn from adult experts in their fields.

Outside of education, people's lives basically revolve around projects. But that's still a "blind spot" in schools, Gardner explains. "I often hypothesize that people probably learn more from the few projects they do in school than from hundreds and hundreds of hours of lectures and homework assignments," he says. "I imagine that many people end up finding their vocation or avocation because they stumbled into a project and discovered they were really interested in it." By the same token, once they're immersed in a project, students might realize they're not really interested in a subject.

Schools, Gardner believes, should pay more attention to helping students discover subject areas that interest them. By focusing on basic skills, schools risk suppressing the positive aspects of children's minds—adventurousness, flexibility, creativity—as well as their natural enthusiasm for learning.

"To declare oneself against the institution of the three Rs in the school is like being against motherhood or the flag," he writes. "Beyond question, students ought to be literate and ought to revel in their literacy. Yet the essential emptiness of this goal is dramatized by the fact that young children in the United States are becoming literate in a *literal* sense; that is, they are mastering the rules of reading and writing, even as they are learning their addition and multiplication tables. What is missing are not the decoding skills, but two other facets: the capacity to read for understanding and the desire to read at all."

In *The Unschooled Mind*, Gardner suggests ways teachers can help students confront their misconceptions and flawed theories in order to develop deeper understanding. One way is through what he calls "Christopherian encounters," named for Christopher Columbus because Columbus challenged the conventional wisdom of his day that the Earth was flat.

In such encounters, students' intuitive ideas are validated or proved false by comparing them with more sophisticated theories about how the world works. For example, a computer simulation that allows physics students to manipulate such forces as velocity and acceleration on an image on the screen might challenge the students' assumptions about the influence of gravity. Or history students might reconsider their beliefs about the causes of World War I by examining conflicting accounts of the same event. The key, Gardner explains, is for students to contemplate and analyze material from as

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many different angles as possible.

"When I talk about Christopherian encounters," he says, "the point I'm trying to make is that the only way to transform our conceptions is for these things to become a major agenda of schools from the very first years. It's got to be something that's done over and over again."

These notions about the mismatch between the way schools teach and the way students learn will undoubtedly challenge people's assumptions about learning in the same way Gardner's 1983 book, *Frames of Mind*, forced people to question their assumptions about intelligence. That book stirred controversy among educators and academics and fueled many cocktail party conversations. In it, Gardner argues that instead of having one all-encompassing mental aptitude that can be measured by an IQ test, people have at least seven separate and distinct intelligences:

- Linguistic: A sensitivity to the meaning and order of words and the ability to make varied use of language; translators or poets exhibit this intelligence.
- Logical-mathematical: The ability to handle chains of reasoning and recognize patterns; mathematicians and scientists exhibit this intelligence.
- Spatial: The ability to perceive the visual world accurately and re-create or transform aspects of it based on those perceptions; sculptors and architects exhibit this intelligence.
- Musical: A sensitivity to pitch, melody, rhythm, and tone; composers and singers exhibit this intelligence.
- Bodily-kinesthetic: The ability to use the body and handle objects skillfully; athletes, dancers, and surgeons exhibit this intelligence.
- Interpersonal: The ability to notice and make distinctions among other people; politicians, salespeople, and religious leaders exhibit this intelligence.
- Intrapersonal: The ability to understand one's own feelings and emotional life; therapists and social workers exhibit this intelligence.

Gardner categorized these intelligences by reviewing studies of a range of people: prodigies, gifted people, brain-damaged patients, idiot savants, individuals from diverse cultures, and experts in various lines of work, as well as typical children and adults. Support for his belief in distinct intelligences comes in part from cases of people who lose their ability to speak but can paint beautifully, or from autistic children who can sing dozens of songs perfectly.

People possess every intelligence in varying strengths, giving everyone a unique "profile" of intelligences, Gardner says. Unfortunately, most schools and teachers emphasize the linguistic and logical-mathematical perspectives at the expense of other areas.

"It's important to recognize that there are many people who could make wonderful contributions to the world who don't happen to have that particular blend," Gardner says. "And if we are concerned with those individuals' lives, we cannot ignore this fact."

Not everyone buys into Gardner's theory. Some leading psychologists, including Yale University's Robert Sternberg, have argued that Gardner has merely described various talents, not intelligences. Sandra Scarr, a psychologist at the University of Virginia, has called Gardner's ideas on multiple intelligences a theory "in which everything good in human behavior is called intelligence." Other skeptics have said the theory provides a convenient excuse for almost any poor performance by students, who can plead inferior intelligence whenever they encounter difficulties.

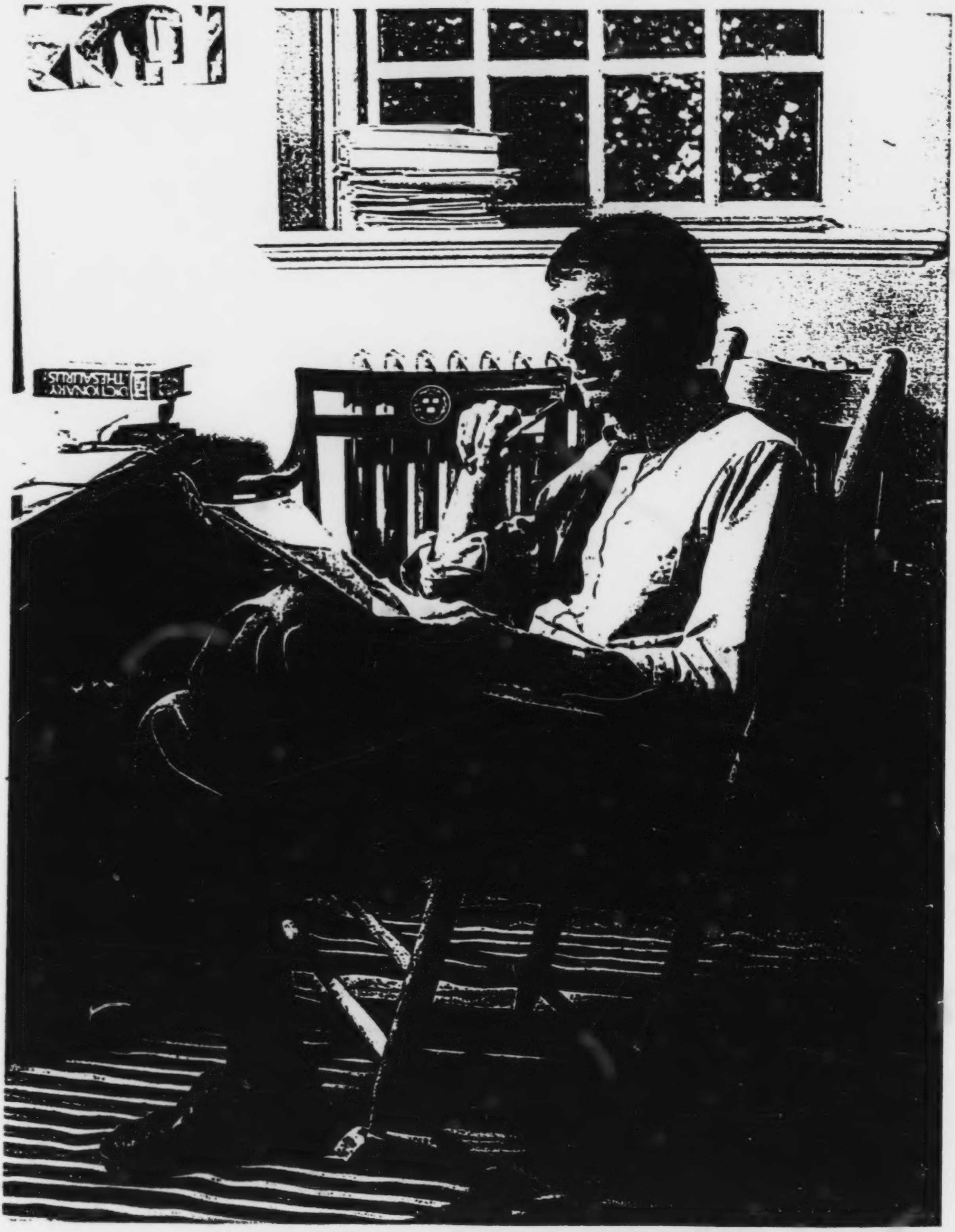
Still, many teachers find the notion "immediately liberating," Gardner says. But, he adds, that doesn't automatically translate into better teaching. "To get teachers to think deeply about their strengths, their students' strengths, and how to achieve curricular goals while taking those strengths and different profiles seriously is a huge job," he says. Teachers can't be expected to become "multiple intelligence mavens," as he puts it, but they should know where to send students for help in, say, music or dance.

Furthermore, an awareness of multiple intelligences can suggest to teachers various ways to present the same material. "So long as one takes only a single perspective or tack on a concept or problem," Gardner writes, "it is virtually certain that students will understand that concept in only the most limited and rigid fashion."

Gardner's ideas about learning and intelligence aren't just the theoretical fancies of an Ivy League academic. For more than 20 years, he has put them to the test at Harvard Project Zero, an interdisciplinary research group that conducts various small-scale studies with teachers and students at different Massachusetts schools. Gardner is co-director of the project, which began in the mid-1960s with a focus on arts education. While he retains a special interest in the arts and artistic creativity, the group has expanded its focus to cover a wide range of topics relating to curriculum, teaching, and assessment.

Not surprisingly, the projects usually require teachers and students to rethink some long-held ideas. Gardner says most people, teachers included, endorse the same view of education they had when they were 5 years old: Schools are authoritarian, punitive institutions in which somebody smart stands in front of a room and tries to pass information on to large groups of students.

Project Zero's undertakings bear little resemblance to this vision of traditional schooling. One of its early-childhood programs, for example, attempts to provide young children with a more rounded education than most typically experience. Preschoolers and primary students in Project Spectrum, as this study is known, explore a range of different learning areas, such as the naturalist's corner, the storytelling area, and the building corner, to name just three of the dozen or so areas that are



Howard Gardner in his Harvard University office

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available. Teachers at Project Spectrum form an impression of the children's strengths and weaknesses by watching them participate in the various games and activities. At the end of the year, they recommend specific activities that parents can do at home or around that community to stimulate the child's learning.

In *The Unschooled Mind*, Gardner writes about one 6-year-old boy who was doing so badly in a regular school that he seemed certain to be held back. In Project Spectrum, the boy proved himself best in the class at assembly tasks, such as taking apart and putting together doorknobs, food grinders, and other common objects. Building on his success in this area, he went on to improve his overall school performance. Once the boy saw he could succeed and realized he had abilities valued by other people, he gained the confidence to do better in other areas, Gardner says.

Gardner's ideas have also provided the framework for the Key School, a public elementary school in Indianapolis that operates on the principle that each child should have his or her many intelligences stimulated every day. "Practically everything we do is put through the filter of multiple intelligences," says Patricia Bolaños, the magnet school's principal.

All Key School students participate in computing, music, and body movement and spend part of each day in one of a dozen apprenticeship-like pods, working with peers, teachers, and other professionals on skills ranging from architecture to gardening to making money. During each 10-week term, the curriculum focuses on a theme; students complete a project dealing with some aspect of the theme, often working with other students or members of the community. They then present their projects to classmates, who ask questions and help the teacher and the presenters assess the work. The presentations are videotaped, so students accumulate a video portfolio over the years.

> Gardner wrote his book *Frames of Mind* for psychologists and educated lay readers; teachers, however, provided the most enthusiastic response.

Although Gardner has no official role at the school—he's an informal consultant—Bolaños says the school's six-year association with him has helped establish its credibility. Word of the school has circulated nationwide; as a result, Bolaños and her staff have received hundreds of requests over the past few years from educators and others wishing to visit.

Teachers at the Key School aren't the only ones flooded with requests from people who want to know more about multiple-intelligence theory and how it applies to schools. Eight years after the publication of *Frames of Mind*, Gardner still can't keep up with all the letters and calls he receives requesting information about his theory. Gardner admits that the book received the sort of publicity most authors—and certainly most psychologists—only dream of. Still, the acclaim wasn't entirely new: In 1981, Gardner was selected as one of the first MacArthur Foundation Fellows, a distinction that included a five-year "genius" award of $196,000 and a lot of attention.

But his prominence spread far beyond academic circles with the publication of his theory of multiple intelligences two years later. Today, the theory has attained pop-culture status; *Washington Post* political reporter Lou Cannon even examined Ronald Reagan through the multiple-intelligence lens in his recent book *Ronald Reagan: The Role of a Lifetime*. Last year, Gardner's work on intelligence earned him another prestigious honor, the Grawemeyer Award in education from the University of Louisville; the award came with a $150,000 stipend.

"I could lead one life just giving workshops and speeches to people who are interested in knowing more about multiple intelligences," Gardner says. "There are about a dozen books already out on the topic and half a dozen people making a living giving workshops on it, none of whom I have anything to do with. I could lead another life just answering all the mail I get for requests for information about it."

Gardner has resisted offers from publishers who would like him to capitalize on this interest and write more "popular" books—something like *The Seven Smarts*, as he puts it. He wrote *Frames of Mind* for psychologists and educated lay readers; but, as it turned out, teachers and other educators provided the most enthusiastic response. With *The Unschooled Mind*, Gardner hopes to reach teachers again, this time with his theories about the 5-year-old mind.

"I think the new book will strike a chord among good teachers," Gardner predicts, "because good teachers will say, 'I've been assuming all along that what I teach is getting across. Here's a guy who seems to know what he's talking about saying that, in fact, what I teach has very little impact, especially after my students leave the classroom.' "

Gardner doesn't want teachers to merely read the book and put it down; he would like them to think about their teaching and embrace approaches to education that focus on genuine understanding. Only when teachers acknowledge and build on the assumptions made by the 5-year-old mind, he says, will students internalize the lessons taught in school and be able to apply them outside the classroom. □

Teaching for Understanding—Within and Across the Disciplines

Howard Gardner and Veronica Boix-Mansilla

The disciplines are the most useful means for illuminating those issues that have perennially engaged the curiosity of thoughtful human beings.

As they enter middle and high school, students are expected to understand central concepts in several disciplines. While students may succeed in "parroting back" phrases from lectures and texts, they often falter when asked to apply their understanding to new situations. What does it take to demonstrate understanding within and across disciplines? Consider the many different ways to approach the following hypothetical but plausible situations:

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- *The New York Times* announced that the Queen of England has stepped down from her throne and at the same time has dis-established the House of Windsor. The English monarchy is at an end.
- *The New England Journal of Medicine* has published a study in which two groups of elementary school students were randomly assigned to two after-school programs: indoor gymnasium sports and personal computer work. Twice as many students in the first group contracted colds. The speculation is that after-school athletics may be injurious to one's health.

Wearing the hat of the disciplinarian, we can consider our first example as drawn from history or social studies and the second from biology or general science. Either account could serve as the point of departure of a set of lessons in appropriate high school classes. If reworded, they could be used with students at virtually any grade level. The first account—which could also refer to the death of a president or the deposing of any kind of leader—raises questions such as "What makes a boss a boss?" or "Why do all civilizations have hierarchies of authority?" The second account could be reformulated to describe any source of disease and to encourage reflections about what keeps us healthy, what is illness, and how to prevent it.

Here we attempt to place current efforts at teaching for understanding into a sharper perspective by considering the way in which this performance view plays out in different disciplines.

Understanding Within the Disciplines

The four-part framework developed by our Teaching for Understanding group is deliberately broad enough to cover the range of disciplines. (See "Putting Understanding Up Front" p. 4.) At the same time, however, all disciplines are not equal. In fact, distinct disciplines have developed over the ages precisely because they allow scholars and students to take different kinds of perspectives and actions in order to elucidate specific kinds of phenomena.

Consider our opening examples. In each case, we are dealing with a central concept: (1) injury to the body politic, and (2) injury to the physical body. Analysis and evaluation of concepts are legitimate tacks in both examples.

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In other respects, however, the disciplinary terrains prove quite different. For instance, to gain relevant expertise in our abdication situation, students might draw on knowledge about British history and its current form of government, as well as the legal and symbolic implications of the abolition of monarchy. Students can "perform" their understandings in any number of ways—ranging from a comparison of the situation at the time of the beheading of King Charles I or the abdication of Edward VIII, to a hypothetical argument in a local pub about the abolition, to the creation of a diagram of the new governmental organization.

By their very nature, historical phenomena are unique. One can compare abdications and beheadings, but they are never the same. When dealing with individual personalities, varying contexts, and dynamic events, the complexity of the events can never be mastered nor the consequences predicted. Finally, events in this sphere take on symbolic as well as literal/legal importance. While in practice the British monarchy has little authority, in actuality it assumes significant symbolic power. A disciplinary understanding of the possible impacts of dis-establishment on British public life is grounded in these specific features of historical events.

In contrast to the historical example, the realm of health and illness, at least in principle, should be open to explanation and prediction. This realm lends itself to the development of models of what causes illness and the testing of the models through experimentation. A well-founded model is able to predict results across diverse populations. Moreover, explicit methodologies exist for mounting experiments and for analyzing data, ones that can be used by anyone schooled in science. Consequently, in the case of colds among athletes, students might gain relevant expertise by drawing on knowledge about health and illness, including bacterial and viral theories of infection, as well as understandings of the nature of scientific hypotheses, experimental designs, and inferences from data. To demonstrate their understanding, students might conduct similar experiments, perform retrospective examinations of the incidence and plausible causes of their own recent colds, or construct rival models of disease.

While disciplines can blind or sway, they become, when used relevantly, our keenest lenses on the world.

From Common Sense to Interdisciplinary Study

So far, we have dealt with might be called "normal" disciplinary work at the secondary level. We have assumed that there are classes that deal with historical-political studies, those that deal with scientific inquiry, and a set of roles and performances appropriate to students in those respective classes.

But we have also argued that younger students could approach the

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Creating Minds

Howard Gardner
New York: Basic Books, 1993

This provocative view of one of the most mysterious of human capacities is a remarkably entertaining piece of scholarship. To draw generalizations about the nature of creativity, Gardner analyzes the lives of seven individuals who made breakthroughs in disparate fields: Freud, Einstein, Picasso, Stravinsky, (T.S.) Eliot, (Martha) Graham, and Gandhi. He chose individuals who illustrate different kinds of intelligence (spatial, kinesthetic, verbal, social, and the like) and who represent the age in which they worked.

Several themes weave through the biographies. One theme is the tendency of creative geniuses to regard themselves as socially or professionally marginal, their adventuresome attitudes often interpreted as insubordination. Motivated by a childlike curiosity, these individuals searched for elemental forms in their respective knowledge domains, forging new symbols in the process. A second theme is the "10-year rule": a creative artist usually works in his or her medium for a decade before producing an innovative breakthrough. Subsequent breakthroughs tend to follow at 10-year intervals.

Additionally, Gardner discusses common personality traits (often aversive), the need for a network of support during periods of creative productivity, and the "peak experience"—a sort of self-hypnotic trance during which artists are totally absorbed in their work.

This book provides insights that teachers can use to humanize the study of history, art, and science; appreciate the many forms of intelligence; and understand and support unusually creative students.

Available from Basic Books, 10 E. 53rd St., New York, NY 10022, (800) 331-3761, for $30.

—Reviewed by Dona Kagan,
Manassas, Virginia.

questions raised in appropriate ways. To illustrate, we single out four stages, corresponding roughly to different points in the growth patterns of students (Gardner and Boix-Mansilla 1993).

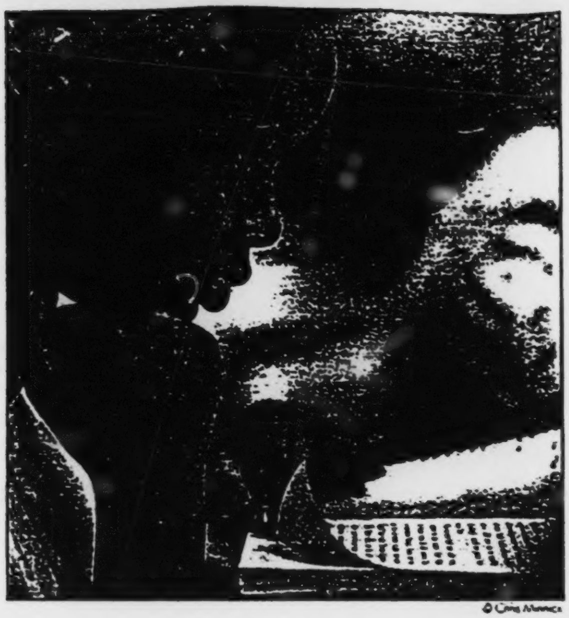
1. Common sense. Novices fruitfully consider generative questions by relying on their intuitive theories of the world—their natural theories of mind, matter, and life (Gardner 1991). Students as young as 5 or 6 can consider what it means to be a leader and then voluntarily or involuntarily to renounce one's position as boss. They can consider what would happen if the teacher or the boss stepped down and no one took his or her place. Adults can ask young students to draw on their own theories of power—the person who is strongest, loudest, bossiest, or the person chosen by someone even more powerful—to debate these issues.

These same students can also be guided into discussions of health. All youngsters are interested in their bodies—what makes them strong, weak, sick, or healthy. They can apply their own naive theories—you are sick because you were bad, because you sat near someone who was sick, because you did not wash your hands—to new events, including the appearance of a new sickness or a new cure. Note that in these cases, it is not important that students espouse the "right theories," but that they draw fully on their own ideas in an effort to make sense—to perform their understandings—of intriguing phenomena.

2. Protodisciplinary knowledge. Even in the absence of formal disciplinary study, students in our culture pick up certain moves that are made by systematic thinkers—through, for example, the media, debates among peers, and partial understanding of texts. Long before they have heard of college catalogues, and despite the movie *JFK*, students in the late primary or early middle grades begin to appreciate the difference between a historical account (what actually happened) and a literary account (a description invented for aesthetic purposes). By the same token, they begin to distinguish claims that are based on conviction or prejudice from claims based on empirical evidence, which itself can be confirmed or questioned.

At this stage, youngsters can proceed in a more sophisticated way. They can read historical or scientific accounts, summarize them, conduct further research, and debate the validity of various claims. And they can engage in projects— such as holding a mock trial or conducting a survey—that introduce them naturally to the tools of the disciplines.

3. Disciplinary knowledge. By late middle school and thereafter, students do most work under the rubric of classical disciplines, such as history, literature, and the sciences. Because it is fashionable to look askance at the disciplines, we feel it is important to make two points. First, disciplines are not the same as subjects. Disciplines constitute the most sophisticated ways yet developed for thinking about and investigating issues that have long fascinated and perplexed thoughtful individuals; subject matters are devices for organizing schedules and catalogues. Second, disciplines represent the principal ways in which individuals transcend ignorance. While disciplines can blind or sway, they



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Students must encounter individual benchmarks on the trail from novice to expert, as well as road maps of how to get from one milestone to the next.

become, when used relevantly, our keenest lenses on the world.

When well taught, students are introduced to the disciplines in several ways. First, they observe teachers or experts who embody the practices of the disciplines. Second, students behold and create exhibitions that capture the accumulated wisdom of the discipline. Third, students encounter the concepts, theories, and methods that disciplinarians have evolved over the years, and receive ample opportunities to put them into practice. Only through such sustained work—work that is "disciplined" in both senses of the term—may students acquire the expertise that we have described.

4. Beyond disciplinary knowledge. Even as it is now fashionable to critique the disciplines, it is trendy to advocate "interdisciplinary" work. At its best, interdisciplinary work is indeed vital and impressive. However, such work can only be legitimately attempted if one has already mastered at least portions of the specific disciplines. Unfortunately, much of what is termed "interdisciplinary" work is actually predisciplinary work—that is, work based on common sense, not on the mastery and integration of a number of component disciplines.

Those who have slogged through a number of specific disciplines are in a privileged position. They can conduct *multidisciplinary* work in which, for example, they look at the abdication of King Edward VIII as portrayed in art, literature, history, and philosophy. They can undertake *interdisciplinary* work, in which they consider the concept of health in terms of both medicine and individual psychology, and then synthesize these perspectives in coming up with a more general account. They can carry on *metadisciplinary* work, in which they compare the practices of particular disciplines, as we have done earlier in this article. And they can engage in *transdisciplinary* work, where they examine a concept, like "body," as it appears in political and in physical discourse.

Disciplinary Powers and Limitations

In our view, the disciplines are the most useful means for illuminating those generative issues that have perennially engaged the curiosity of thoughtful human beings. What in the past was approached first through common sense, and later through art, mythology, and religion, can now be approached as well through systematic studies, such as political science or medical experimentation.

While we should be respectful of disciplines, we should remain aware of at least three limitations:

1. *Far from being ends in themselves, the disciplines are means for answering generative "essential" questions.* Indeed, armed with the disciplines and with the possibility of interdisciplinary work, individuals are in the best position to revisit these essential questions and to arrive at their own, often deeply personal answers.

2. *Disciplines are differently transfigured, depending on purpose and developmental levels.* For elementary education, it may be enough to separate out the arts and humanities, on the one hand, and the experimental sciences on the other. At the high school level, a distinction into three or four disciplinary terrains probably suffices (Sizer 1992). And at the university level, a quite fine differentiation and articulation among disciplines is appropriate.

3. *All disciplinary boundaries are tentative.* Disciplines have not been, and probably never will be, marked in stone. Rather, they develop out of specific conditions, and as these conditions change, boundaries are redrawn. Moreover, even within the most established disciplines, serious disagreements exist with respect to content, methods, and scope. The dynamism of disciplines reflects the always growing, ever-changing nature of knowledge.

Assessment Within and Across the Disciplines

Some aspects of assessment are appropriate for all disciplines, while others turn out to be far more specific to particular disciplinary practices. At the generic level, each discipline features certain characteristic roles—the historical analyst, the designer of experiments—and certain characteristic performances or exhibitions—a historical account, an experimental write-up. Students need to be immersed in instances of these roles and performances of understanding, particularly as they are practiced by proficient individuals.

Different disciplines call on different analytic styles, approaches to problem solving and findings, temperaments, and intelligences.

But even the best instances do not suffice. It does not benefit the rookie pianist to hear Arthur Rubinstein or the novice tennis player only to witness Martina Navratilova. Rather, students must encounter individual benchmarks on the trail from novice to expert, as well as road maps of how to get from one milestone to the next. Given these landmarks, along with ample opportunity to perform their understanding with appropriate feedback, most individuals should be able to steadily enhance their competence in any discipline.

Of course, disciplines lend themselves to different kinds of roles and performances. To read texts critically, in the manner of a historian, is a quite different matter than to design a crucial experiment and analyze data relevant to competing models of an infectious process. Different disciplines call on different analytic styles, approaches to problem solving and findings, temperaments, and intelligences. Therefore, a keen assessment must be alert to these disciplinary differences. By the same token, an effective teacher should help youngsters to appreciate that what counts as cause and effect, data and explanation, use of language and argument, varies across the disciplines.

From Disciplinary to Personal Knowledge

All individuals the world over, not just knowledgeable people, ask generative questions. Children do not ask about the meaning of life and death or good and bad merely because others talk about these issues. Rather, these questions arise spontaneously, prompting children to pose them in their own way and to come up with imaginative answers. The disciplines, individually and jointly, offer the best current efforts to approach, and to supply, provisional answers for these enduring questions. As we saw in our two simple examples (about abdication and illness), just as questions come from different points and lead to different kinds of answers, the disciplines themselves have disparate roots and lead, by varying routes, to different kinds of accounts.

Drawing on the disciplines, we should find it possible to mount increasingly comprehensive approaches to generative questions—approaches that are appropriate to particular contexts and populations. In the end, however, we need to keep in mind that the disciplines remain but the means for tackling these questions. The most important answers are those that individuals ultimately craft for themselves, based on their disciplinary understandings, their personal experiences, and their own feelings and values. ■

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The Key School

A description written by the teachers at the school.

In September, 1987, the Key School opened as one small event in the national thrust for educational reconstruction. Established as a K–6 magnet school, its roots grow deeply in the Neo-Progressive soil of American education by which it is nourished.

To provide a base line for determining future development is the purpose of this report. Collaboration is the key to our success and nowhere is the challenge to stretch more pressing than in the development of the interdisciplinary curriculum. This documentation of the staff's first efforts is extremely important, particularly in view of the fact the Key School has received national attention. We are denied the luxury of remaining unknown until we are certain our efforts prove significant.

The actual mission of the Key School is to produce knowledge in the following areas: (a) the role of the arts in general education, (b) interdisciplinary curriculum development, (c) collaborative professional development, and (d) qualitative educational evaluation. All of these areas are integrated into this report.

The questions driving collaborative action are as follows:

What does basic research tell us about human intelligence and how does this knowledge affect our priorities?

- Give equal emphasis to linguistic, musical, logical mathematical, spatial, bodily kinesthetic, interpersonal and intrapersonal intelligences (Gardner, 1983). This is verified by the staffing and scheduling patterns.

What do all students need to experience?

- Stress the themes for general education as articulated by Ernest Boyer.

  I suggest six themes that may provide an appropriate structure for the nation's schools...

  Share Use of Symbols
  Shared Memberships in Groups and Institutions
  Shared Producing and Consuming
  Shared Relationships with Nature
  Shared Sense of Time
  Shared Values and Beliefs (Boyer, 1982)

Guidance and Counseling

Overview

Standard (e) requires that school districts plan and implement a program to provide guidance and counseling services to all pupils enrolled in the district. The program shall be planned and implemented to meet age and grade level appropriate personal, social, educational, and career/vocational child development and learning needs. Consistent with the school district goals for education, the program will foster lifelong attitudes toward learning and career/employment goals as well as positive attitudes toward self, family, and society.

Research on school and life success clearly demonstrates that quality elementary and secondary guidance and counseling programs which address personal, social, learning, and career/vocational needs enables parents and students to better cope with the many challenges and opportunities occurring during the school age years. Counseling and guidance services include instruction, individual counseling, and group interaction as well as a variety of other activities. Other pupil services staff, parents, and community human services resources must be part of the total program to ensure that all students are assisted and supported as they grow and mature.

DPI staff assist districts in the design, implementation, evaluation, and refining of guidance and counseling programs. Ongoing DPI collaboration with and review of university school counselor preparation programs in Wisconsin ensure quality control in the preparation and continuing education of school counselors. Federal support through the Carl Perkins Vocational and Applied Technology Education Act administered by DPI enables school districts and CESA's to develop, expand, and improve career/vocational/employment guidance programs. The department publishes resource guides, program models, and other materials to be used by school districts to develop and maintain quality school guidance and counseling programs. The department also works closely with the Wisconsin School Counselor Association (WSCA) and other pupil services professional organizations to better coordinate services to children and families.

Administrative Rule

PI 8.01(2)(e). Each school district board shall provide a program of guidance and counseling services for all pupils, which meets all of the following requirements:

1. The school district shall maintain a school board approved plan for the provision of a program of guidance and counseling services.

2. The program shall be developmentally based and available to every pupil in every grade of the school district.

3. The program shall be
   a. Systematically planned by licensed school counselors in collaboration with other licensed pupil services staff, teachers, parents and community health and human service professionals.
   b. Provided by licensed school counselors in collaboration with other licensed pupil services staff, teachers, parents and community health and human service professionals.

4. The program shall provide developmentally appropriate educational, vocational, career, personal and social information to assist pupils in problem solving and in making decisions.

5. The program shall include pupil appraisal, post-secondary planning, referral, research and pupil follow-up activities.

Definition of Terms

Counseling. The active personal process of guiding an individual or group in personal problem solving and decision making regarding personal, social, educational, and career/vocational/employability goals and aspirations.

Follow-up activities. Activities concerned with finding out what happens to students after they leave school. Gathering information from school leavers can assist the school to determine the adequacy of the educational experience in terms of preparing students for work or additional education. This information can be used to modify programs or specific services such as guidance and counseling. (Not a legal definition; provided for guidance only.)

Guidance. The process of leading, directing, or advising through a program of services which provides students with information, support, instruction, and encouragement to assist them in developing personal, social, educational, and career/vocational/ employability skills.

Placement. Helping students make informed decisions about an appropriate curriculum, subjects within the curriculum, extracurricular activities, and special groups or opportunities in school or the community. Placement also includes assisting students to secure part-time, summer, and full-time employment after their school career is terminated and to enroll in postsecondary educational and training situations. (Not a legal definition; provided for guidance only.)

Pupil appraisal. The gathering and organizing of a sufficient variety of information from students so that adequate data are available on personal abilities, interests, attitudes, health, and other needs pertaining to personal, social, learning, and career/vocational development. (Not a legal definition; provided for guidance only.)

School guidance and counseling program. A written plan for the design and systematic delivery of developmentally based guidance and counseling services available to all pupils enrolled in the district.

Developmentally based. In accord with age and grade level child development and learning needs and competencies.

Related Standards

Standard (L). In grades 5 to 8, provide regular instruction in language arts, social studies, mathematics, science, health, physical education, art, and music. The school board shall provide pupils with an introduction to career exploration and planning.

Standard (m). Provide access to an education for employment program.

Standard (n). Develop a plan for children at risk under s. 118.153, Stats.

Standard (t). Provide access to an appropriate program for pupils identified as gifted and talented.

Meeting Standard (e)

Requirement	Example of Documentation
Provide guidance and counseling to all students.	• District plan and policy to provide service.
Maintain a school board approved plan for the program of counseling and guidance services.	• Written program plan with provisions for annual update and review.
The program be developmentally based, systematically planned, and provided by licensed school counselors.	• Document the child development and learning model used to determine student outcomes. Document program design and implementation procedures. Document evidence of counselor certification.
The program be planned and provided in collaboration with other licensed pupil services staff, teachers, parents, and community health and human service professionals.	• Document in the program plan and implementation that counseling and guidance services are coordinated with those provided by other pupil services staff, teachers, parents, and community resources.
The program provide developmentally appropriate educational, vocational, career, personal, and social information; pupil appraisal; postsecondary placement; pupil referral; research; and pupil follow-up activities.	• Document ways in which the program activities provide the listed pertinent areas of counseling and guidance services.

Questions and Answers

1. **Must guidance and counseling services be provided for every student in the district?**
   Yes, each pupil in the school district must have an opportunity to be equally served in a planned, written, and sequential program of school guidance and counseling services. This requirement is designed to ensure that developmentally appropriate guidance and counseling services are provided at both the elementary and secondary levels. School districts are expected to develop services for all students K-12 and staff them appropriately and fully.

2. **Must there be a written guidance and counseling plan for the district?**
   Yes, the district shall have written evidence that its guidance and counseling program is developmentally based, systematically planned, and provided by DPI-licensed guidance and counseling personnel. The plan should provide evidence that the guidance and counseling program is sequential and articulated across all grades. It is also recommended that the plan include long- and short-range goals and objectives based on the developmental needs of children and adolescents. The program is expected to be organized in a manner that maximizes the services provided by a school counselor and integrates the guidance resources available through other pupil services staff, teachers, administrators, parents, and the community. The program should address the learning, personal, social, career, and vocational developmental needs of students and should be subject to continuous, systematic evaluation and revision.

3. **Must DPI-licensed school counselors be employed by the district to carry out guidance and counseling services?**
   Yes, the district shall have written evidence that its guidance and counseling program is planned and provided by DPI-licensed guidance and counseling personnel. Individuals with the school counseling license have the preparation necessary to provide the planning, design, and delivery of specific personal/social, educational, and career/vocational/employability counseling and guidance services. As a minimum, licensed counselors should be acknowledged as core planners and providers, but not have exclusive responsibility or obligation to either plan or deliver the district's total guidance and counseling program. There is no minimum amount of required time that guidance and counseling personnel should spend in a particular school building or a required counselor/pupil ratio.

4. **Do specific counselor/pupil ratios exist that must be observed by the district?**
   No. Assignment of school counselors to school buildings and counselor/pupil ratios are at the discretion of the school district in accord with the district's guidance and counseling program implementation plan. Suggested counselor/pupil ratios based on national research studies are published in the department's *School Counseling Programs: A Resource and Planning Guide*. The district has the responsibility to assign other pupil services professionals and staff to fully implement the district's guidance and other programs as children's needs dictate.

5. **What is the meaning of "in collaboration with"?**
   "In collaboration with" means the representatives of all providers of the district's guidance and counseling program be included in the planning and delivery of services to achieve the statutory requirement for the district's program. A developmentally based guidance and counseling program establishes the foundation for broad range

pupil services delivery. The department recognizes that licensed school counselors should have key responsibilities for the program.

6. **What constitutes a program of guidance and counseling?**
A program is characterized by a specific plan, delivery system, and evaluation mechanism to determine effectiveness. It is recommended that the district's guidance and counseling program be consistent with the primary mission of the school, namely, school attendance and achievement for all pupils. The program should assist pupils with learning readiness, school achievement, career/vocational/employability skill development, goal setting, decisionmaking, and personal maturation. Such a program should be:

- K-12 in scope
- based on the personal/social, vocational, and educational development needs of all pupils
- organized to provide a strong referral and networking system with a variety of guidance and counseling providers including other pupil services staff, teachers, parents, and community resources
- organized with specific evaluation criteria
- preventive in nature
- managed and coordinated to be an integral part of the district's total educational program
- formed around a delivery system with counselors at the core and other services integrated into a total pupil services program

DPI Resources

Personnel

Bureau for Pupil Services
Nancy Holloway, Director
(608) 266-8960

Dennis Van Den Heuvel, Guidance and Counseling Consultant
(608) 266-2829

Bureau for School Improvement
Robert Gomoll, Director
(608) 266-2658

Standards Implementation Section
Section Chief
(608) 267-2063

Chuck Misky, High School Graduation Standards Consultant
(608) 267-6826

Programs

Carl Perkins Vocational and Applied Technology Education Act funds are administered by DPI and available on a competitive grant basis to local districts. Funds are available specifically for the expansion or improvement of K-12 career/vocational/employability guidance programs.

Publications

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NEW K-12 GUIDANCE SYSTEM

GRADES K-5

Teacher Role
Classroom instruction per revised WDGM and Standards L, K and M provided by teacher (under direction of school counselor)

Student Outcomes
Through revised WDGM and regular classroom curriculum, learn about:
- Academic Competencies
- Personal/Social Competencies
- Career/Vocational Competencies

Counselor Role
Facilitates and directs revised WDGM curriculum and activities
- Provides responsive referrals

Student Portfolio
Student Portfolio is a record of academic and personal progress

4th GRADE MILESTONE ASSESSMENT

GRADES 6-8

Teacher Role
Classroom instruction per revised WDGM and Standards L, K, and M provided by teacher (under direction of school counselor)

Student Outcomes
Through revised WDGM and regular classroom curriculum, understand competencies

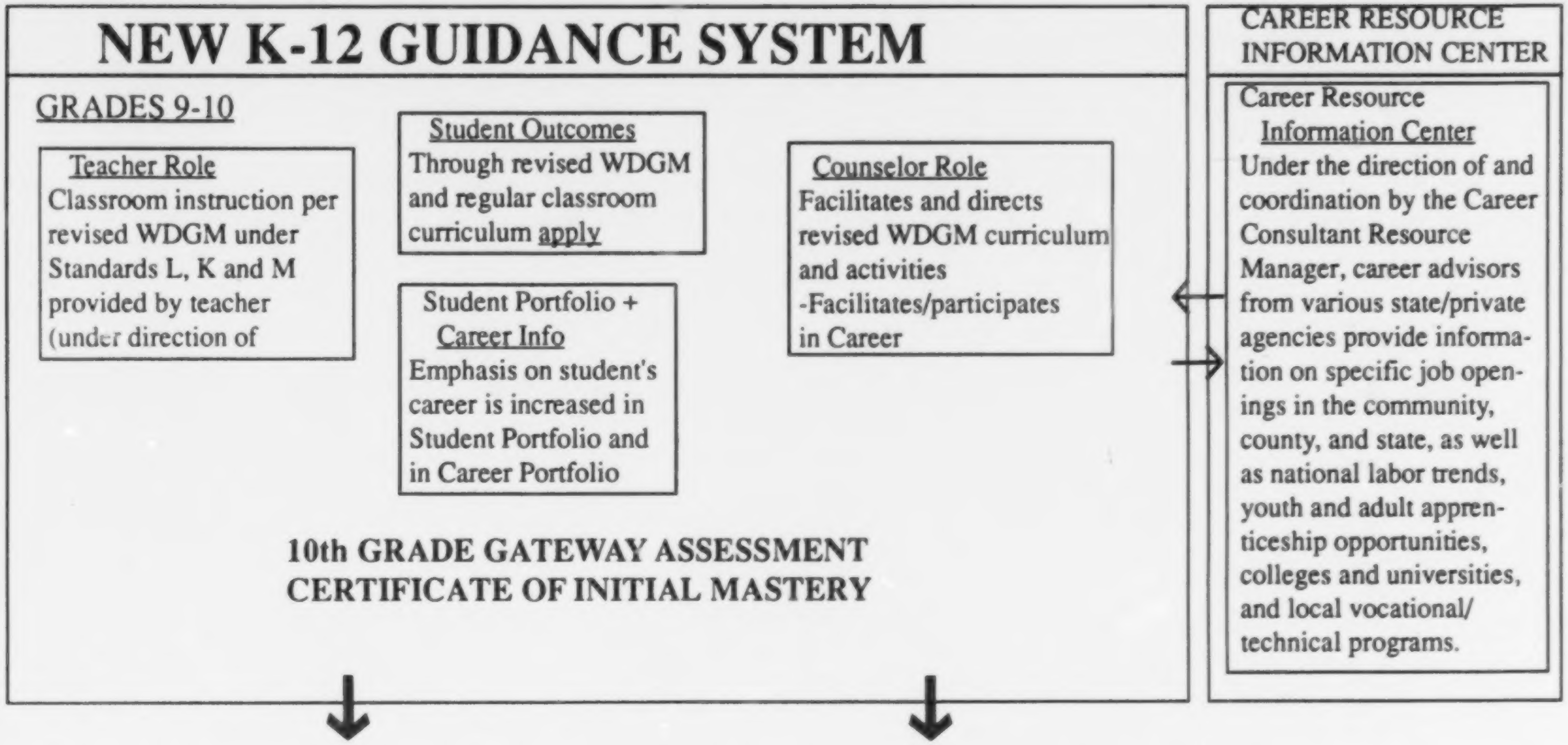
Student Portfolio + Career Info
Beginning in 6th grade, career info is added to Student Portfolio. Student begins working with Career Portfolio Team to guide student in exploration and planning of personal/career pursuits

Counselor Role
Facilitates and directs revised WDGM curriculum and activities
- Facilitates/participates in Career Portfolio Team activities
- Refers to Career Resource Info Center
- Provides responsive referrals

8th GRADE MILESTONE ASSESSMENT

CAREER RESOURCE INFORMATION CENTER

Career Resource Information Center
Under the direction of and coordination by the Career Consultant Resource Manager, career advisors from various state/private agencies provide information on specific job openings in the community, county, and state, as well as national labor trends, youth and adult apprenticeship opportunities, colleges and universities, and local vocational/technical programs.



NEW K-12 GUIDANCE SYSTEM

GRADES 9-10

Teacher Role
Classroom instruction per revised WDGM under Standards L, K and M provided by teacher (under direction of

Student Outcomes
Through revised WDGM and regular classroom curriculum apply

Student Portfolio + Career Info
Emphasis on student's career is increased in Student Portfolio and in Career Portfolio

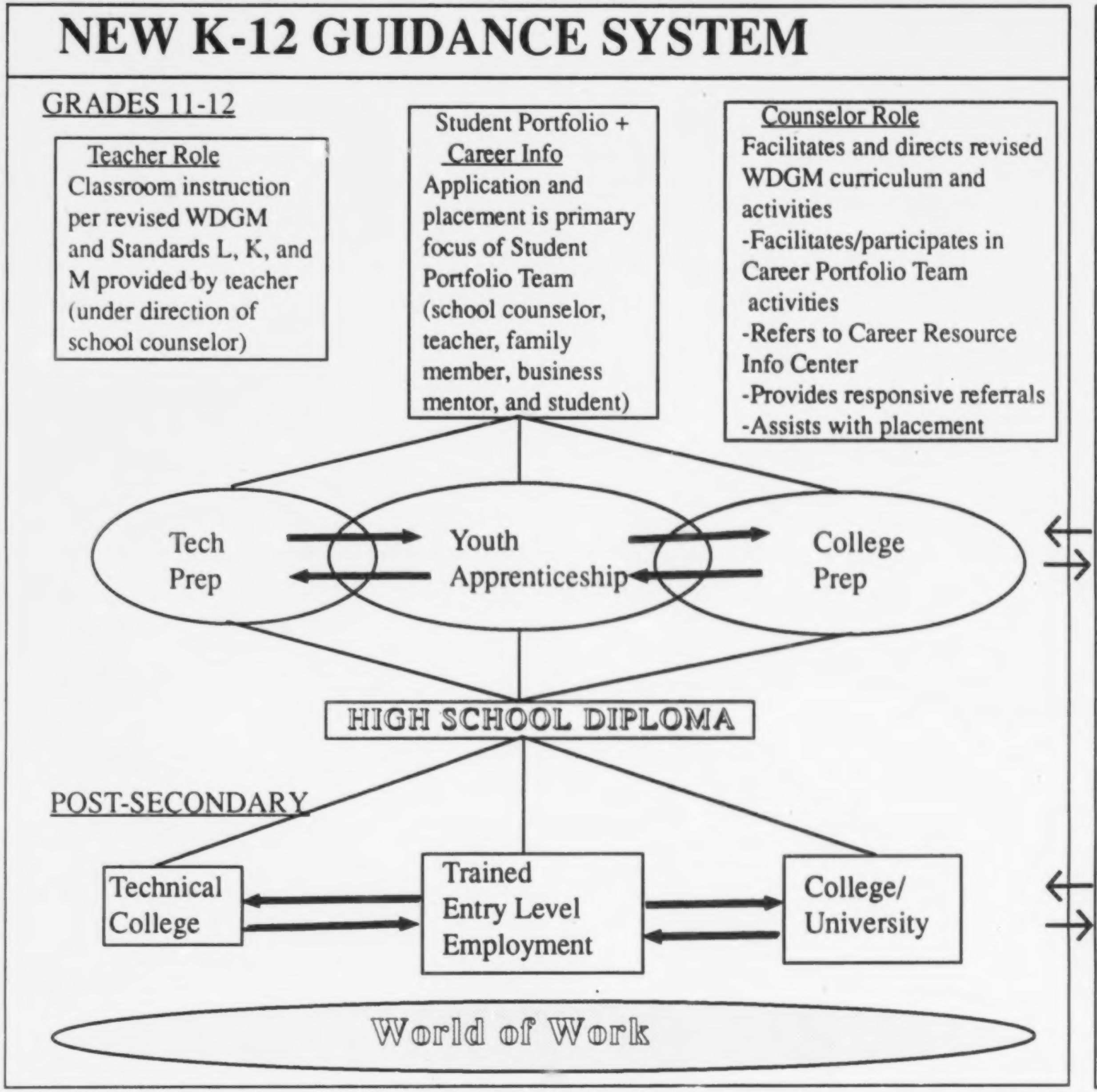
Counselor Role
Facilitates and directs revised WDGM curriculum and activities
-Facilitates/participates in Career

10th GRADE GATEWAY ASSESSMENT
CERTIFICATE OF INITIAL MASTERY

CAREER RESOURCE INFORMATION CENTER

Career Resource Information Center
Under the direction of and coordination by the Career Consultant Resource Manager, career advisors from various state/private agencies provide information on specific job openings in the community, county, and state, as well as national labor trends, youth and adult apprenticeship opportunities, colleges and universities, and local vocational/technical programs.

NEW K-12 GUIDANCE SYSTEM



GRADES 11-12

Teacher Role
Classroom instruction per revised WDGM and Standards L, K, and M provided by teacher (under direction of school counselor)

Student Portfolio + Career Info
Application and placement is primary focus of Student Portfolio Team (school counselor, teacher, family member, business mentor, and student)

Counselor Role
Facilitates and directs revised WDGM curriculum and activities
-Facilitates/participates in Career Portfolio Team activities
-Refers to Career Resource Info Center
-Provides responsive referrals
-Assists with placement

CAREER RESOURCE INFORMATION CENTERS

Career Resource Information Center

Under the direction of and coordination by the Career Consultant Resource Manager, career advisors provide information concerning:
-specific job openings in local community, county, state, region, and country.
-community, county, state, region, and national labor trends
-youth and adult apprenticeship opportunities
-local vocational/technical programs
-college and university programs and resources

The priorities/customers served by the Career Resource Information Centers are:
-K-12 students, staff, and parents
-Vocational, Technical, and Adult Education, college, and university students and staff
-Employers and labor
-Adult job seekers/career changers

The career advisors can be on loan from:
-Government institutions (Dept. of Public Instruction, Dept. of Industry, Labor and Human Relations, Dept. of Health and Social Services, and Dept. of Development)
-Educational institutions (Wisconsin Career Information System, Vocational, Technical and Adult Education, University of Wisconsin system, and private colleges and universities)
-Local employers and business organizations (including Chamber of Commerce, Wisconsin Manufacturers and Commerce Association, and business training personnel)

Appendix J

A Systems Approach to Individual Learning and Development

by Dennis Van Den Heuvel

The pupil competencies in the Wisconsin Developmental Guidance Model are based upon the work of a number of developmental theorists. Appendix J presents a compilation from developmental theories of age-appropriate capabilities, skills, and behaviors and the guidance needs of children and adolescents at the various developmental stages.

Age/Grade Level	Emerging Physical and Psychological Capabilities	Micro-System Integration	Macro-System Integration	Indentifying Behaviors	Developmental Correlates	Expected Functional Skills Repertoire	General Guidance Needs
Age 1–4 years Preschool	-Sensory motor skills -Basic recall/memory -Language acquisition/usage -Physical motor skills -Imagination/ symbolic imagery -"Present" time orientation	-Body awareness -Self-awareness -Security -Imitation and modeling styles -Managing bodily functions -Simple cause-effective relationships	Primary 1. Family 2. Siblings Secondary 1. Child care adults 2. Child care mates 3. Culture 4. Family & community religious moral orientation	-Observing -Testing physical -Imitating -Obeying/ conforming -Modeling -Memorizing -Labeling -Immediate gratification	-Presocial differentiation -Impulsive (Loevinger) -Sensorimotor stage (Piaget) -Psychological survival orientation, physical satisfaction (Maslow) -Physical morality (Kohlberg) -Nonintegrated knowledge (Bloom) -Symbolic play (Hunt) -Cognition (Guillford)	-Basic physical motor skills -Sensory knowledge processing -Self-control - physical and social -Language-modeling/ usage -Cultural absorption -Sense of obedience and consequences of behavior -Acknowledgment of sources of gratification -Basic sense of fair play	-Recognition of basic security and support from primary and secondary macro-systems -Stimulation of micro-systems through incidental and structured learning situations provided through macro-systems -Basic & consistent set of personal, social, cultural, and moral parameters established through the macro-systems -Reinforcement for intellectual and social achievements

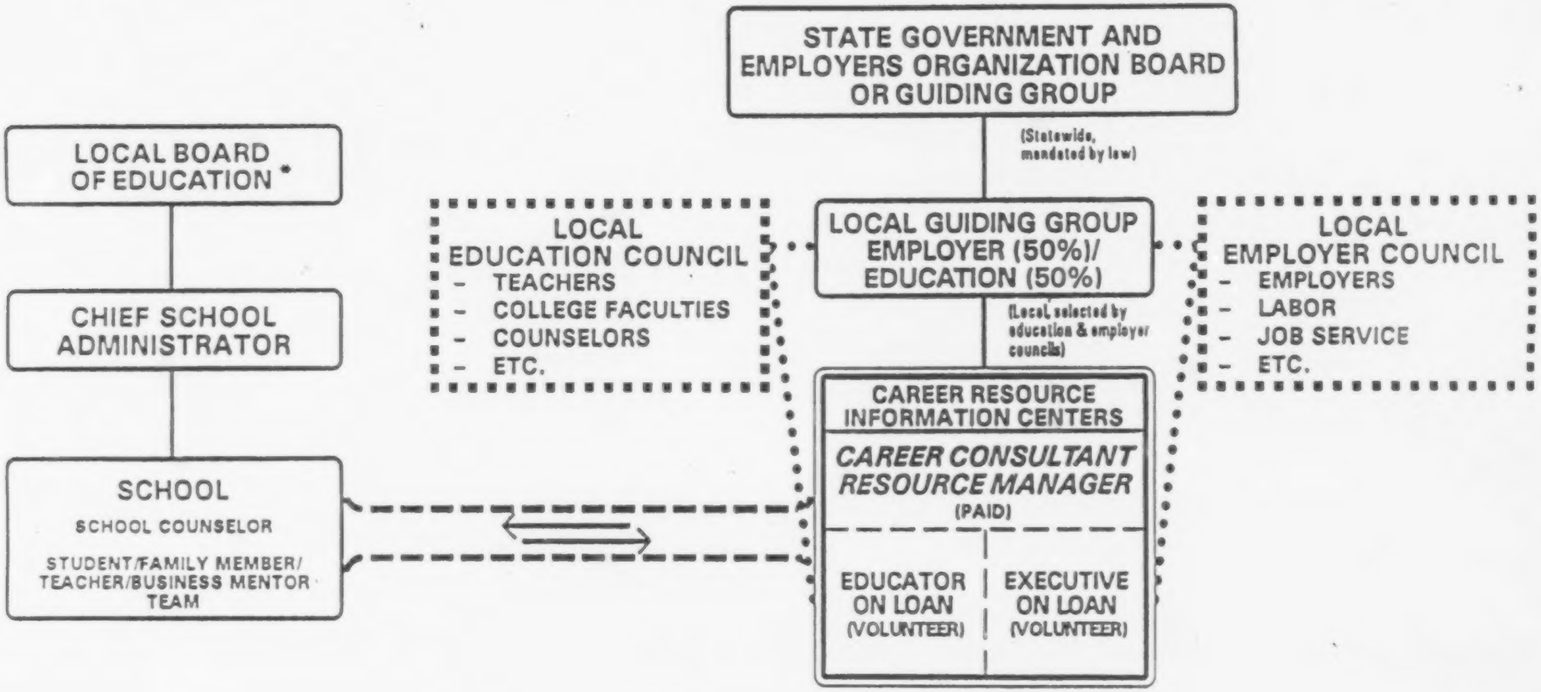
Age/Grade Level	Emerging Physical and Psychological Capabilities	Micro-System Integration	Macro-System Integration	Indentifying Behaviors	Developmental Correlates	Expected Functional Skills Repertoire	General Guidance Needs
Age 5–10 years Grades K-6	-Concrete operations on reality -Symbolic representation and reflex knowledge -Active memory -Effective language usage -Inventions of abstract combinations and associations -Gender identification and relationships -Physical coordination	-Awareness of self in social context -Sense of conformity and duty -Awareness of psychological self -Sense of physical, intellectual potency -Acclimation to social, cultural, and gender stereotyping -Self-monitoring -Expanded awareness of cause-effect relationships -Temporal orientation to past-present-future	Primary 1. Family 2. School 3. Peers Secondary 1. Local community 2. Neighborhood 3. Church, clubs -Socio-economic status -Cultural heritage -Group/team membership	-Recognizing -Modeling -Short-term predicting -Effective verbal communication -Insight into causes of things -Imagining -Converting -Transformations -Convergent thinking -Cooperating -Obeying -Role playing -Responding -Personal satisfaction with learning and achieving -Labeling -Identifying -Memorizing	-Concrete operations (Piaget) -Social modeling (Bandura) -Self-protective, conformist, opportunistic (Loevinger) -Safety, love, affection, belongingness (Maslow) -Conformity, duty, social approval (Kohlberg) -Comprehension, responding (Bloom) -Memory (Guilford)	-Sense of fair play -Social competition and cooperation -Understand the meaning of personal expectation -Know the criteria for self-evaluation (physical and intellectual) -Knowledge of authority and duty -Responsibility for learning and social relationships -Sense of personal potency (locus of control) -Effective intra- and inter-personal communication -Social adaptation: limits of conformity and deviation -Social norms -Moral norms -Cultural norms -Self-concept of identity	-Basic evaluation and monitoring skills -Basic problem-solving techniques to cope with intellectual and social conflicting situations -Social ethics -Basic learning techniques and habits -Recognition of social support systems (parents, school staff, church, peers, community, neighbors) -Evaluate the quality of various support systems -Coping skills for personal welfare: physical, intellectual, social, and emotional -Social communication training -Ability to effectively utilize and integrate various micro- & macro- support systems

Age/Grade Level	Emerging Physical and Psychological Capabilities	Micro-System Integration	Macro-System Integration	Indentifying Behaviors	Developmental Correlates	Expected Functional Skills Repertoire	General Guidance Needs
Age 11-14 years Grades 7-9	-Formal operations -Abstract & logical thinking -Self-concept of intellectual and social identity -Initial introspection and utilization of reflex knowledge -Time-projective skills -Sexual identity resolution	-Identification of self-concept and self-esteem in family, school, peer contexts -Sense of potency to influence personal and social systems -Acknowledgment of personal intellectual and social capabilities -Affiliation with reference groups -Awareness of parameters of independence -Sex-role orientation	Primary 1. Family 2. Peer group 3. School 4. Community Secondary Cultural and status affiliations -Local media & politics -Local laws and mores (social and religious) -Local concepts of work and productivity	-Reacting -Revolting -Screening -Applying -Changing -Sorting -Judging -Coping -Modeling -Choosing -Preparing -Valuing -Categorizing -Classifying -Distinguishing -Cooperating	-Initial formal operations -Individual & situational role taking (Piaget) -Validation of self-efficacy -Self-referent thought (Bandura) -Social cognition -Meta-cognitive knowledge (Falvell) -Interpersonal concordance -Esteem (Kohlberg) -Self-respect/ esteem (Maslow) -Conscientiousness (Loevinger) -Application, valuing (Bloom) -Convergent/ divergent (Guilford)	-Problem-solving techniques -Application of content knowledge -Sense of responsibility to self and others in social contexts -Active sense of self and social esteem -Evaluation of self in personal and social situations -Sense of cooperation and collaboration -Self-motivation and reinforcement techniques -Value identity and monitoring -Sex-role orientation	-Study skills -Problem-solving processes -Clarification of personal, social, and religious value systems -Knowledge of sex roles-implications for educational/ social roles -Feedback on personal achievements and performance -Balance between cooperation and independence -Decision-making processes -Sense of control and responsibility for personal behavior -Social adaptation coping techniques

Age/Grade Level	Emerging Physical and Psychological Capabilities	Micro-System Integration	Macro-System Integration	Indentifying Behaviors	Developmental Correlates	Expected Functional Skills Repertoire	General Guidance Needs
Age 15–19 years Grades 10-12	-Mature formal operations -Abstract and logical thinking -Functional past-present-future time perspective -Psycho-physical integration -Personal potency to act upon concrete and abstract realities -Mature symbolic communication -Complex mental associations & relationships	-Awareness of personal potencies -Self-concept in various social contexts -Internalization of values -Evaluation of self in social contexts -Academic and social self-esteem -Awareness of shift from passive to proactive projection -Unique reality coping style -Competition	Primary 1. Peer group 2. School/work settings 3. Friends Secondary 1. Family 2. Social status (present & aspirations) -Cultural conformity/ departure -Community groups -Social and religious mores -Government -Politics -Media -Economics	-Accommodating -Integrating -Projecting -Interacting -Exchanging -Coping -Managing -Synthesizing -Producing -Inventing -Creating -Evaluating -Judging -Comparing -Critiquing -Supporting	-Formal operations (Piaget) -Synthesis/ evaluation -Organization/ characterization (Bloom) -Autonomous/ Integrated (Loevinger) -Self-actualization (Maslow) -Universal ethics (Kohlberg) -Evaluation (Guilford)	-Responsibility for personal decisions -Recognition of skills/ competency -Sense of self-evaluation in various situations -Personal assertiveness based on competence and interests -Collaboration, cooperation skills to achieve personal goals in social contexts -Ability to utilize past learning -Ability to project future goals/ objectives	-Decision-making skills -Goal-attainment scaling -Effective communication -Self and situational monitoring and evaluation techniques -Assertiveness training -Problem-solving techniques -Macro-system integration techniques -Recognition of self-esteem -Coping with uncertainty and conflict -Access rules to personal growth and to social institutions -Rites of passage

Reprinted from: Wisconsin Department of Public Instruction's School Counseling Programs Resource & Planning Guide
Bureau for Pupil Services
Division for Handicapped Children and Pupil Services
Wisconsin Department of Public Instruction
Herbert J. Grover, State Superintendent

CAREER CONSULTANT RESOURCE MANAGER



STATE GOVERNMENT AND EMPLOYERS ORGANIZATION BOARD OR GUIDING GROUP

(Statewide, mandated by law)

LOCAL BOARD OF EDUCATION *

CHIEF SCHOOL ADMINISTRATOR

SCHOOL

SCHOOL COUNSELOR

STUDENT/FAMILY MEMBER/ TEACHER/BUSINESS MENTOR TEAM

LOCAL EDUCATION COUNCIL
- TEACHERS
- COLLEGE FACULTIES
- COUNSELORS
- ETC.

LOCAL GUIDING GROUP EMPLOYER (50%)/ EDUCATION (50%)

(Local, selected by education & employer councils)

LOCAL EMPLOYER COUNCIL
- EMPLOYERS
- LABOR
- JOB SERVICE
- ETC.

CAREER RESOURCE INFORMATION CENTERS

CAREER CONSULTANT RESOURCE MANAGER

(PAID)

EDUCATOR ON LOAN (VOLUNTEER)

EXECUTIVE ON LOAN (VOLUNTEER)

KEY PRINCIPLES

- The State Government and Employers Board or Guiding Group is an intergovernment agency with both the authority and funding to ensure that the Career Resource Information Centers can operate as part of an integrated system to coordinate resources and services.
- The local Guiding Group provides leadership and resources for each local Career Resource Information Center.
- The Career Consultant Resource Manager brokers services and information between the private sector and the school system.

* A local consortium of school districts can be organized in low population density areas.

October 15, 1992

GOAL V:
Every adult American will be literate and will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship.

The COUNSELOR will work directly with STUDENTS to:

- facilitate personal growth and development;
- understand the importance of physical, mental, and emotional health;
- develop excellent communication skills and cooperative work skills;
- learn how to develop interpersonal skill to relate well to others;
- ensure those from a culturally diverse background access to appropriate services and opportunities that promote maximum development;
- encourage life-long learning.

GOAL VI:
Every school in America will be free of drugs and violence and will offer a disciplined environment conducive to learning.

The COUNSELOR works directly with STUDENTS to:

- provide education and information in conjunction with agencies about personal safety and prevention of abuse;
- develop effective coping skills necessary to refuse participation in substance abuse and physical violence;
- develop problem-solving and decision-making skills with a focus on self-assertion and conflict resolution.

School counselors are the in-school providers of the services for students through comprehensive prevention and intervention programs. They create a team approach to problem-solving by working in consultation with parents, school professionals, and community/business people.

Students need specific information and counseling to address the societal problems they bring to school. Early exposure to a comprehensive school counseling program builds an emotionally healthy foundation for children and results in improved academic achievement.

We must all take responsibility for our children, for their future is our future. Teachers and parents look to counselors to respond to the social, emotional and career development needs of all students.

In developing policies and programs to address the problems our young people face, we must make the best use of all our resources. School counselors are often the only mental health professionals to whom students will have access and they are the professionals who bridge the academic and affective domain in students' lives.

Together, counselors, teachers, parents, and policymakers create a powerful force in the fight to enhance the lives of our young people. Through these collaborative efforts, children will achieve their maximum potential.

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ASCA
American School Counselor Association

American School Counselor Association
a division of the
American Association for Counseling and Development
5999 Stevenson Avenue
Alexandria, Virginia 22304-3303.
703/823-9800

BEST COPY AVAILABLE

Children
are our future . . .

★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★

SCHOOL COUNSELING 2000

As we approach the 21st century, our complex culture is characterized by diverse and ever-changing values in the home, community, and school. Societal problems are reflected in dramatic increases in substance abuse, suicide, child abuse, teen pregnancy, truancy, school drop out, and random acts of violence.

The following statistics (1) illustrate the magnitude of the problem.

✓ Every 26 seconds, a child runs away from home.

✓ Every 47 seconds, a child is abused or neglected.

✓ Every seven minutes, a child is killed or injured by guns.

✓ Every day 100,000 children are homeless.

✓ Every school day, 135,000 children bring guns to school.

✓ Every eight seconds of the school day, a child drops out.

✓ Every day six teenagers commit suicide.

✓ Every day 2,989 American children experience divorce in their families.

Children affected by these and other problems are not able to achieve their academic potential. The school counselor's primary task is to help them to become better learners by providing individual and group counseling and life skills training.

The National Education Goals

Recently, national leaders have proposed six broad goals to achieve success in American education. School counselors play a vital role in achieving these goals. Following is a brief description of how each national goal is tied to developmental school counseling programs.

All children in America will start school ready to learn.

The COUNSELOR works directly with PARENTS and TEACHERS to:

- help create a positive school climate in which children can learn;
- assure a coordinated team effort to address needs of all students;
- help children develop a positive self-concept and the motivation necessary to prepare for learning;
- enhance open communication to prepare children for the school environment;
- provide information and support regarding future educational development;
- identify those children who are developmentally disabled or disadvantaged and need access to pre-school programs;
- work with Headstart children as they make the transition into schools.

GOAL II:
The high school graduation rate will increase to at least 90 percent.

The COUNSELOR works directly with all STUDENTS, PARENTS, TEACHERS, COMMUNITY MEMBERS, and EMPLOYERS to:

- provide for the continual benefits of a comprehensive developmental school counseling program through life skills training;
- ensure access to the services of other professionals including school social workers, psychologists, and nurses;
- develop a comprehensive educational/career plan for each student which targets high school completion and exploration of postsecondary opportunities;
- establish school-to-work transition programs.

...students will... demonstrate competency in challenging subject matter...; and every school in America will ensure that all students learn to use their minds well, so they may be prepared for responsible citizenship, further learning, and productive employment in our modern economy.

The COUNSELOR works directly with STUDENTS through developmental counseling curriculum to acquire NEW BASIC SKILLS (2) to:

- learn how to manage, organize information, make decisions, and deal with change;
- develop positive attitudes toward work and encourage work experience activities;
- acquire skills and make a smooth transition from school to work;
- develop skills for planning, monitoring, and managing personal, career, and lifestyle development;
- develop transferable skills to facilitate changes throughout their life-time.

GOAL IV:
United States students will be first in the world in science and mathematics achievement.

The COUNSELOR works directly with STUDENTS to:

- emphasize the importance of math and science in the workplace for every student;
- encourage higher levels of math and science in preparation for pursuing postsecondary education;
- fully explore their educational and career opportunities, particularly those based in math and science;
- identify the career opportunities for those who excel in math and science.

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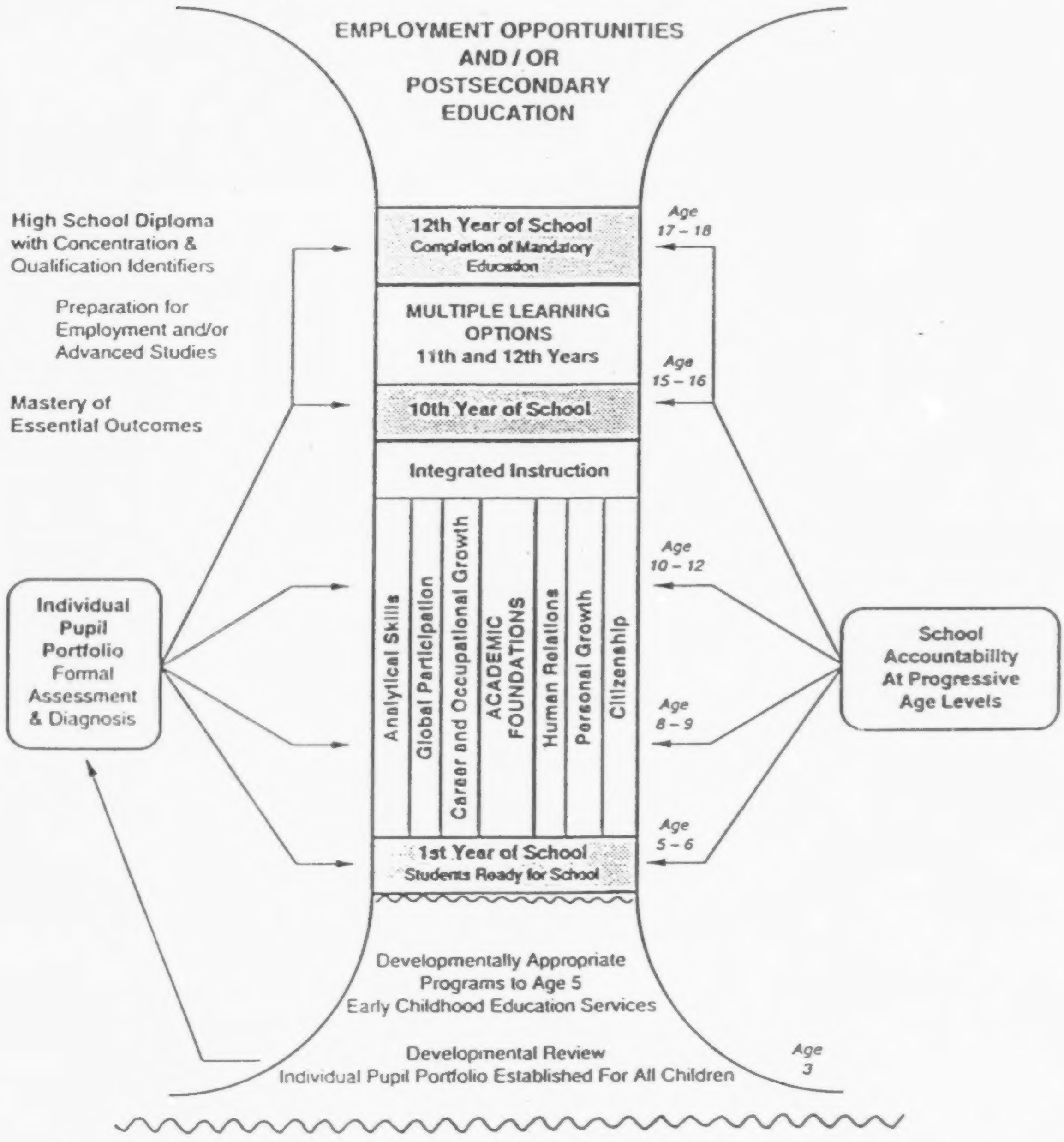
THE LEARNING TREE


EMPLOYMENT OPPORTUNITIES
AND / OR
POSTSECONDARY
EDUCATION
12th Year of School
Completion of Mandatory Education
MULTIPLE LEARNING OPTIONS
11th and 12th Years
10th Year of School
Integrated Instruction
Analytical Skills
Global Participation
Career and Occupational Growth
ACADEMIC FOUNDATIONS
Human Relations
Personal Growth
Citizenship
1st Year of School
Students Ready for School
Developmentally Appropriate
Programs to Age 5
Early Childhood Education Services
Developmental Review
Individual Pupil Portfolio Established For All Children
High School Diploma
with Concentration &
Qualification Identifiers
Preparation for
Employment and/or
Advanced Studies
Mastery of
Essential Outcomes
Individual
Pupil
Portfolio
Formal
Assessment
& Diagnosis
School
Accountability
At Progressive
Age Levels
Age 17 – 18
Age 15 – 16
Age 10 – 12
Age 8 – 9
Age 5 – 6
Age 3

A STATE CURRICULUM FRAMEWORK FOR

- Continuous Student Progress
- Parental Involvement
- School Accountability

Commission on Schools for the 21st Century - State of Wisconsin

The Learning Tree:
An Overview of the State Curriculum Framework

The first educational review of children would occur at the age of three, as explained in the illustration on the next page. Information and suggestions would be shared with the parents and recorded in the Individual Pupil Portfolio. Plans would be made for children in consultation with their parents and educational specialists.

Next, in preschool programs for three- and four-year-olds, developmentally appropriate progress would provide for successful beginning learning experiences in a variety of settings. Student success at the preschool level would help prepare them to enter the first formal year at age five.

The curriculum framework extends from the first year of instruction through mastery by age 15 or 16 of the essential learner outcomes developed to meet state goals in each of the seven components of the model. These outcomes would correspond to the knowledge and skills normally associated with graduation from high school.

Following demonstration of mastery, students would select from a number of learning options designed to meet their differing talents and needs. Although the emphasis and level of attainment would vary from option to option, all would present continuing opportunities to develop in the seven categories of the curriculum framework. Completion of these options would be the final step in earning a high school diploma which could be accompanied by a certificate of work readiness and evidence of a public service project. To make those options available, increased cooperation among schools, VTAE institutions, employers, and colleges and universities will be required. Indeed, collaboration on behalf of students must be a hallmark of schooling for the 21st century.

After high school graduation at age 17 or 18, students could continue their options which might include full-time entry into the work force, enrollment in a postsecondary institution, or combinations of work with apprenticeship or higher education.

Running through the process would be two related strands of assessment: one would evaluate student progress, including use of the Individual Pupil Portfolio for diagnosis and program decisions; the other would address school accountability and provide benchmarks for performance-based assessments at the ages indicated on "The Learning Tree."

INTEGRATED EDUCATION MODEL
CURRICULUM FRAMEWORK

Every Student will give evidence of the knowledge, skills, and understandings in each of the following areas.

Academic Foundations

Communications
-development of strong literacy skills (reading, writing, speaking, listening, non-verbal skills)

-languages

-fine arts

-literature

Development of Numeracy Skills (Computation, logic, probability, and statistics)

Development of Scientific Skills (scientific process, basic principles of physical, chemical & biological sciences)

Computer Literacy

Technology Applications

Vocational Applications

Governmental & Economic Understanding

Citizenship Application

History

Geography

Cultural Heritage

Study & Information Skills

Analytic Skills

Critical Thinking

Creative Thinking

Applications
-reasoning

-problem solving

-decision making

-information retrieval and processing

-evaluating

-inquisitiveness & explanation

-visual thinking

Citizenship

Rights, Duties, Responsibilities, Citizens and the Role of Government

Economic Understanding

Role of Individual in Community & Family

Racial, Ethnic, Cultural Diversity, Histories of U.S.

Moral and Ethical Obligations

Human Relations

Leadership

Team Work

Cultural Interdependence

Respect and Responsibility for Self and Others

Interpersonal Skills

Adaptability

Equity

Accepting People

Being Effective in Organizations

Shared Decision Making

Negotiating

Global Participation

Cultural Literacy and Diversities

Languages

Geopolitics/Economics

Environmental Stewardship

Interdependence

Impact of Institutions/Organizations on Global Society

Personal Growth

- Citizenship
- Leisure Time
- Health & Wellness
- Positive Self-Image
- Human Growth and Development
- Motivation and Persistence
- Application of Values and Ethics
- Risk-Taking and Experimentation
- Financial Management
- Integrity
- Family Relationships
- Goal Setting
- Independence
- Cope with Change
- Experiencing the Arts

Career & Occupational Development

- Self Understanding and Perceptions
- Knowledge of Occupational Characteristis
- Career Awareness and Preparation Requirements
- Career Assessment and Identity
- Respect All Occupations
- Understanding How To Obtain and Maintain Employment
- Positive Work Attitudes and Habits
- Skill Acquisition
- Entrepreneurship

SCANS

LEARNING A LIVING:

A BLUEPRINT FOR HIGH PERFORMANCE

* * * * *

A SCANS REPORT FOR AMERICA 2000

EXECUTIVE SUMMARY

SCANS
THE SECRETARY'S COMMISSION ON ACHIEVING NECESSARY SKILL
U.S. DEPARTMENT OF LABOR

APRIL 1992

PRINCIPLES AND RECOMMENDATIONS

The Secretary's Commission on Achieving Necessary Skills (SCANS) was appointed by the Secretary of Labor to determine the skills our young people need to succeed in the world of work. The Commission's fundamental purpose is to encourage a high-performance economy characterized by high-skill, high-wage employment.

Our primary message to schools is this: Look beyond the schoolhouse to the roles students will play when they leave to become workers, parents, and citizens.

Our message to teachers is this: Look beyond your discipline and your classroom to the other courses your students take, to your community, and to the lives of your students outside school. Help your students connect what they learn in class to the world outside.

Our message to employers is this: Look outside your company and change your view of your responsibilities for human resource development. Your old responsibilities were to select the best available applicants and to retain those you hired. Your new responsibilities must be to improve the way you organize work and to develop the human resources in your community, your firm, and your nation.

We want to state at the outset that the well-being of the nation—and its citizens—is not synonymous with economic status. There is much more to life than earning a living, and we want more from schools than productive workers. We want citizens who can discharge the responsibilities that go with living in a democra-

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TTD* phone: 1-800-326-2577

*Telecommunications Device for the Deaf.

ic society and with being parents. As we said in our first report: "A solid education is its own reward and has value beyond specific skills." We are not talking about turning our high schools into trade schools. Nor do we suggest that schools ignore the beauty of literature and scientific theories or the lessons of history and geography.

SCANS has focused on one important aspect of schooling: what we call the "learning a living" system. In 1991 we issued our initial report, *What Work Requires of Schools*. As outlined in that report, a high-performance workplace requires workers who have a solid foundation in the basic literacy and computational skills, in the thinking skills necessary to put knowledge to work, and in the personal qualities that make workers dedicated and trustworthy.

But a solid foundation is not enough. High-performance workplaces also require competencies: the ability to manage resources, to work amicably and productively with others, to acquire and use information, to master complex systems, and to work with a variety of technologies. This combination of foundation skills and workplace competencies—"workplace know-how" (see Exhibit 1)—is not taught in many schools or required for most diplomas.

The time when a high school diploma was a sure ticket to a job is within the memory of workers who have not yet retired; yet in many places today a high school diploma is little more than a certificate of attendance. As a result, employers discount the value of all diplomas, and many students do not work hard in high school.

As shown in Exhibit 2, the market value of a high school diploma is falling. The proportion of men between the ages of 25 and 54 with high school diplomas who earn less than

EXHIBIT 1

WORKPLACE KNOW-HOW

The know-how identified by SCANS is made up of five workplace competencies and a three-part foundation of skills and personal qualities that are needed for solid job performance. These are:

WORKPLACE COMPETENCIES — Effective workers can productively use:

- **Resources**—They know how to allocate time, money, materials, space, and staff.
- **Interpersonal skills**—They can work on teams, teach others, serve customers, lead, negotiate, and work well with people from culturally diverse backgrounds.
- **Information**—They can acquire and evaluate data, organize and maintain files, interpret and communicate, and use computers to process information.
- **Systems**—They understand social, organizational, and technological systems; they can monitor and correct performance; and they can design or improve systems.
- **Technology**—They can select equipment and tools, apply technology to specific tasks, and maintain and troubleshoot equipment.

FOUNDATION SKILLS — Competent workers in the high-performance workplace need:

- **Basic Skills**—reading, writing, arithmetic and mathematics, speaking, and listening.
- **Thinking Skills**—the ability to learn, to reason, to think creatively, to make decisions, and to solve problems.
- **Personal Qualities**—individual responsibility, self-esteem and self-management, sociability, and integrity.

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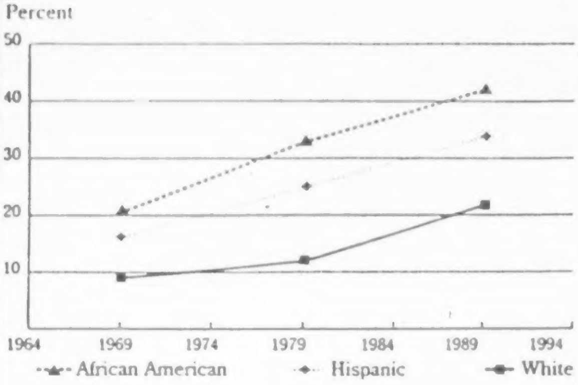
EXHIBIT 2

THE PROPORTION OF MALE HIGH SCHOOL GRADUATES UNABLE TO SUPPORT A FAMILY OF FOUR IS GROWING*



*Males ages, 25–54, with 12 years of education whose own earnings are less than the poverty level for a family of four. Family income may be higher.

Source: Sheldon Danziger, "The Poor," in David Hornbeck and Lester Salamon, *Human Capital and America's Future.* (Baltimore: Johns Hopkins Press, 1991), p. 148, and unpublished data for 1989.

enough to support a family of four above the poverty line is growing alarmingly. Among African-American men with 12 years of schooling, the proportion with low earnings rose from 20 percent in 1969 to 42.7 percent in 1989; among Hispanic men, from 16.4 to 35.9 percent; and among white men, from 8.3 percent to 22.6 percent. That is, in 1989 more than two in five African-American men, one in three Hispanic men, and one in five white men, all with high school diplomas, did not earn enough to lift a family of four above poverty. Unless there is a second earner, their families will not have what most would call a decent living.

The workplace know-how SCANS has defined is related both to competent performance and to higher earnings for the people who possess it. Exhibit 3 compares the know-how required in 23 high-wage jobs with the requirements of 23 low-wage jobs. The conclusion is inescapable: workers with more know-how command a higher wage—on average, 58 percent, or $11,200 a year, higher.

Everyone must have the opportunity to reach the higher levels of skills and competencies shown in Exhibit 3. To that end, the Commission has recast the broad principles set forth in *What Work Requires of Schools* as the context for our recommendations:

- **The qualities of high performance that today characterize our most competitive companies must become the standard for the vast majority of our employers, public and private, large and small, local and global.**
- **The nation's schools must be transformed into high-performance organizations.**
- **All Americans should be entitled to multiple opportunities to learn the SCANS know-how well enough to earn a decent living.**

To make this a reality we recommend:

1. **The nation's school systems should make the SCANS foundation skills and workplace competencies explicit objectives of instruction at all levels.**
2. **Assessment systems should provide students and workers with a résumé documenting attainment of the SCANS know-how.**
3. **All employers, public and private, should incorporate the SCANS know-how into all their human resource development efforts.**

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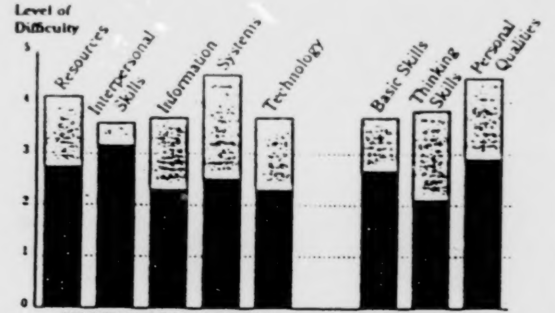
EXHIBIT 3

HIGH-WAGE JOBS REQUIRE HIGHER LEVELS OF THE SCANS KNOW-HOW



■ = Level for low-wage jobs ($298 average weekly wage)

▨ + ■ = Level for high-wage jobs ($513 average weekly wage)

Average difference–$11,200 annually

Source: Secretary's Commission on Achieving Necessary Skills

4. **The Federal Government should continue to bridge the gap between school and the high-performance workplace, by advancing the SCANS agenda.**
5. **Every employer in America should create its own strategic vision around the principles of the high-performance workplace.**

IMPLEMENTATION

The Commission recognizes that nationwide policies are of little value until they are carried out by people on the front line. Cities such as Fort Worth, Los Angeles, Pittsburgh, Tampa, and Louisville and states such as Florida, Indiana, New York, and Oregon have taken steps to put the broad SCANS principles in place in their school systems at the local and state levels. In the corporate sector, TGI Friday's, MCI, Gannett, Motorola, NationsBank, and AT&T (and its major unions) are taking action. A number of trade organizations in the hospitality field have joined together to introduce the SCANS language into their industry. The U.S. Department of Labor is moving to build SCANS into various aspects of Job Training Partnership Act programs. The Federal Government's Office of Personnel Management (OPM) is seeking ways to apply SCANS findings in skills centers for Federal employees.

These leaders and those who follow them can begin the systemic change to a high-performance future. In the process they will have to reinvent education, reorganize work and work-based learning, and restructure educational assessment.

REINVENTING K-12 EDUCATION

During the 1980s the United States, seeking to improve public schools, tried to get more results through tighter curricula, higher certification standards for teachers, and more testing of everyone. Despite the effort, students were performing essentially no better at the end of the decade than they were at the beginning. More of the same was not a successful strategy.

As this Commission argued in *What Work Requires of Schools*, American society today requires that elementary and secondary schools meet drastically different goals. The job now is to bring all students to a level that, in the past, only a small minority reached. Experts universally agree that this job requires reinventing elementary and secondary education.

President Bush and the nation's governors have agreed on a set of six goals for education. These goals have been generally agreed to by state governments, education leaders, and business groups such as the Business

Roundtable. SCANS supports all six goals; its recommendations are particularly pertinent to the two goals that refer to preparing youth and adults for productive employment in our competitive economy.

The experience of schools, districts, and states that are advancing toward high-performance schooling provides important lessons for educators wishing to teach the SCANS know-how:

- **Teaching should be offered "in context," that is, students should learn content while solving realistic problems. "Learning in order to know" should not be separated from "learning in order to do."**
- **Improving the match between what work requires and what students are taught requires changing how instruction is delivered and how students learn.**
- **High performance requires a new system of school administration and assessment.**
- **The entire community must be involved.**

Exhibit 4, drawn from experience in Fort Worth, Texas, outlines how the traditional classroom differs from the SCANS classroom. The conventions of today's classroom (teacher omniscience, student passivity and isolation, rigid disciplinary borders, and "abstracted" knowledge and facts) are replaced with sophisticated and more realistic concepts of instruction and learning (the teacher may not know all the answers, students often learn best in groups, and knowledge is related to real problems).

Resources

Of all the resources required for reinventing schools around the SCANS ends, none are more important than those devoted to

teacher training and staff development. Providing training opportunities for instructional staff will be costly, especially if teachers and administrators are to be given the time they need during the school day and summers for training. But teachers, noninstructional staff, and building and school-district administrators need time if they are to:

- Develop new pedagogical skills required to teach in context and to develop active, collaborative learning environments;
- Learn new instructional management skills and use new instructional technologies to develop new ways of interacting with students; and
- Gain experience with the principles of high performance as applied in restructured workplaces.

Emerging instructional technologies promise to revolutionize teaching and learning by enabling teachers and students to change their traditional roles. When technology dispenses information, teachers are free to coach and facilitate student learning. With technology monitoring learning, students can become active learners, working to acquire new skills.

The SCANS competencies cannot be widely taught unless teachers have instructional materials: textbooks and other print materials, and computer-based and multimedia materials. Video and multimedia materials are essential to creating the realistic contexts in which the competencies are used.

Equity and Diversity

The changes advocated by the Commission promise great benefits to minority and low-income Americans. One-third of new entrants into the American labor force are members of minority groups; they are entitled to an education that will let them learn and will equip

E BIT 4

E CONVENTIONAL CLASSROOM MPARED WITH THE SCANS CLASSROOM

OM THE CONVENTIONAL CLASSROOM	TO THE SCANS CLASSROOM
acher knows answer.	More than one solution may be viable and teacher may not have it in advance.
udents routinely work alone.	Students routinely work with teachers, peers, and community members.
eacher plans all activities.	Students and teachers plan and negotiate activities.
Teacher makes all assessments.	Students routinely assess themselves.
Information is organized, evaluated, interpreted and communicated to students by teacher .	Information is acquired, evaluated, organized, interpreted, and communicated by students to appropriate audiences.
Organizing system of the classroom is simple: one teacher teaches 30 students.	Organizing systems are complex: teacher and students both reach out beyond school for additional information.
Reading, writing, and math are treated as separate disciplines; listening and speaking often are missing from curriculum.	Disciplines needed for problem solving are integrated; listening and speaking are fundamental parts of learning.
Thinking is usually theoretical and "academic."	Thinking involves problem solving, reasoning, and decision making.
Students are expected to conform to teacher's behavioral expectations; integrity and honesty are monitored by teacher; student self-esteem is often poor.	Students are expected to be responsible, sociable, self-managing, and resourceful; integrity and honesty are monitored within the social context of the classroom; students' self-esteem is high because they are in charge of their own learning.

Source: Fort Worth Public Schools.

them to find and hold a decent job. Because children vary, not only as individuals but also as members of different cultural, racial, and ethnic groups, education must take into account three basic elements that contribute to this diversity:

1. Differences in family income,
2. Limited English-speaking proficiency (LEP), and
3. Differences in learning styles.

Variation and diversity are not the enemies of high-quality education. The enemy is rigid insistence on a factory model of schooling, a prescription for failure that refuses to accommodate diversity or to allow those students with special strengths to function productively.

REORGANIZING FOR HIGH-PERFORMANCE WORK AND WORK-BASED LEARNING

Both high-performance workplaces and highly trained workers are needed if we are to build a high-skilled, high-wage economy. Reinventing K-12 education is necessary but not sufficient because about 80 percent of the workers on whom American employers will depend as we enter the 21st century are already on the job. To create high-performance workplaces, employers must actively work to develop the skills and competencies of these workers. Only in this way can they constantly improve the quality of the goods and services they provide and satisfy their customers' needs.

Every American employer, public or private, large or small, local or global, must consider the human resources needed for high performance and high quality. Yet today, American companies do much less training than some of our international competitors; in fact, fewer than 10 percent of front-line American workers now receive training of any kind.

The Commission believes that employer-sponsored training, both public and private, must be upgraded and organized around the SCANS know-how. As a useful first step, coalitions of trade associations, business organizations, labor unions, and industry-specific groups could develop training strategies and materials around the SCANS know-how for use by all businesses, particularly small firms.

Many young people between the ages of 16 to 25 today are frustrated because their high schools talked of English and geometry, but their workplace speaks a different language. In a system that serves people beyond high school, employers would describe job requirements in terms of the SCANS workplace competencies and use these for recruitment and employee development. Human resource and training managers would reorient their education and training offerings to include not only job-specific skills but also the SCANS workplace competencies and foundation skills.

Providers of education—vocational schools, proprietary schools, community colleges, adult education, and work-based programs—would offer instruction and certification in SCANS workplace competencies. Referral agencies—job counselors in high schools, in employment agencies and the Employment Service, or in the skill centers newly recommended by the Administration—would assess their clients' SCANS workplace competencies, understand job and educational requirements and opportunities in the same terms, and refer clients to career-enhancing work and education.

RESTRUCTURING EDUCATIONAL ASSESSMENT

A system for assessing and certifying the SCANS workplace know-how is essential. If employers and colleges pay attention to the SCANS foundation skills and workplace competencies, students will work to acquire them. If teachers have to certify that the know-how is acquired, they will make the effort to teach it. If parents and community groups understand the standards that graduates are expected to attain, they will demand that their children reach these levels.

The Commission supports the emerging national consensus calling for a new, nationwide, voluntary assessment system. The Commission believes the system should incorporate new techniques of judging performance—not "tests" as traditionally understood, but assessment tied to learning goals. The National Council on Education Standards and Testing has endorsed including SCANS workplace competencies in the system it recommended, stating that the SCANS competencies "can and should be integrated into the national standards and assessments."[1] The Commission hopes that the curriculum development work of several groups—the National Council of Teachers of Mathematics, the National Council of Teachers of English, the National Science Teachers Association, and others—will follow this advice.

The Commission believes that a national system, as recommended by the National Council on Education Standards and Testing, should integrate assessment of proficiency in SCANS know-how with other equally important outcomes of schooling. Such a system is needed to:

- Communicate world-class standards of curriculum content and student performance, and
- Certify individual performance and thereby motivate students and their teachers to meet these standards.

The challenge is to design a system that clearly establishes that all young people in our nation have the right to an education up to a recognized performance standard—without putting the burden of failure on students' backs.

The Commission suggests establishing for all students, beginning in middle school, a cumulative résumé. The résumé would contain information about courses taken, projects completed, and proficiency levels attained in each competency. A student who accomplishes enough to meet an overall standard would be awarded a certificate of initial mastery (CIM), a universally recognized statement of experience and accomplishment. The information would mean the same thing to everybody: this person has the SCANS workplace know-how noted here. (See Exhibit 5 for a hypothetical résumé.)

Students would be free to use their résumés in seeking employment or further education at any time. Employers could be expected to demand from students the highest level of certification that the job demands (i.e., high-performance workplaces can demand high skills including, but not limited to, those required for the CIM). It would be up to the consumers of this information—employers, colleges, the military, or others—to decide what weight to give each element in the résumé, using their own needs and criteria as guides.

In addition to the education-based assessment, a way to assess and certify persons who are already in the workforce (an experience-based assessment) is needed. The Federal Government, some private firms, and a coalition of trade associations in the hospitality industry have begun the hard work that will lead to the needed assessment tools.

IMPROVING THE "LEARNING A LIVING" SYSTEM

The Commission understands that preparation for work is only part of the mission of schools, and that school is only part of the

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[1] *Raising Standards for American Education* (Washington, D.C.: National Council on Education Standards and Testing, January 1992).

EXHIBIT 5

HYPOTHETICAL RÉSUMÉ

Jane Smith
19 Main Street
Anytown
Home Phone: (817) 777-3333

Date of Report: 5/1/92
Soc. Sec.: 599-46-1234
Date of Birth: 3/7/73
Age: 19

SCANS Workplace Competency	Date	Proficiency Level
Resources	10/91	1
Interpersonal Skills	12/91	2
Information	11/92	3
Technology	1/92	2
Systems	4/92	3

Core Academic and Elective Courses	Date	Proficiency Level
English	11/91	3
Mathematics	12/91	3
Science	2/91	3
History	4/91	2
Geography	8/91	1
Fine Arts	11/91	4
Vocational/Industrial Education	4/92	2

SCANS Personal Qualities	Average Rating	No. of Ratings
Responsibility	Excellent	10
Self-Esteem	Excellent	10
Sociability	Excellent	8
Self-Management	Excellent	7
Integrity/Honesty	Good	6

Portfolios and Other Materials Available	Reference
1. Report on Grounds Keeping (Chemistry)	Mr. Kent
2. Video on Architectural Styles (Social Studies)	Ms. Jones
3. Newspaper Article Written	Ms. French

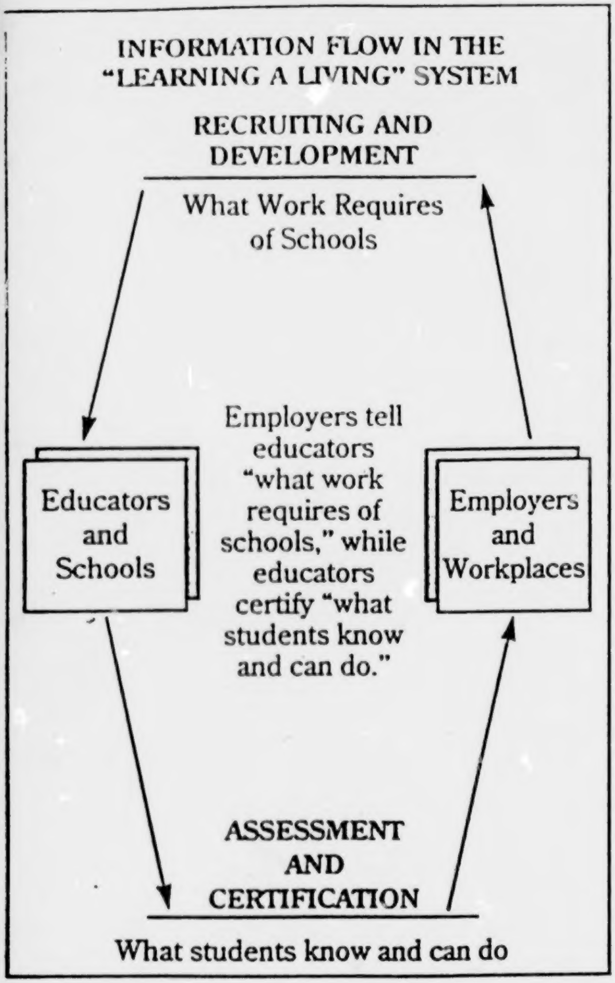
Extracurricular Activities	Role	Date	Reference
Newspaper	Reporter	9/89–1/90	Frank Jones (Adviser)
Basketball Varsity	Center	9/90–6/91	Dean Smith (Coach)

Awards and Honors	Date	Source	Reference
Teen Volunteer of the Year	6/91	Rotary Club	John Grove
Class Secretary	9/91–1/92	Lincoln High School	Emma Rice
		Earned	**Required**
Points Toward Certificate of Initial Mastery		300	500

(Supplied by Student)

Work Experience	Date	Place	Reference
Volunteer Work	6/88–6/89	St. Joseph Homeless Shelter	Father John O'Connell (508) 296-3304
Summer Camp Counselor	6/91–8/91	Camp Kiowa	Susan Miller (508) 628-5128
Office (Word Processor)	1/90–5/92	PDQ Secretarial Help	Myrna Copper (508) 389-0202

EXHIBIT 6


INFORMATION FLOW IN THE "LEARNING A LIVING" SYSTEM

RECRUITING AND DEVELOPMENT
What Work Requires of Schools
Educators and Schools
Employers tell educators "what work requires of schools," while educators certify "what students know and can do."
Employers and Workplaces
ASSESSMENT AND CERTIFICATION
What students know and can do

learning process. President Bush has spoken of the need for America to be a nation of learners and for the "education revolution" to extend beyond the schools into the community. This report is concerned with those parts of education and work that form the "learning a living" system (see Exhibit 6).

The box on the left side of Exhibit 6 represents education. Within it, at least through the second year of high school, students learn the SCANS know-how in English, math, science, history, and geography; in other classes (e.g., art); and in extracurricular activities.

The basic idea is that all students follow a common academic program, a single track, until they are about 16. After age 16, some students are more likely to be learning the SCANS know-how in the context of work, perhaps by specializing in the application of the competencies to a particular industry, such as manufacturing or hospitality.

Some of these students will go on to community colleges in a 2+2 tech-prep program, a program that begins with the last two years of high school and leads to an associate degree after two years of college. Other students will continue to learn the SCANS know-how in academic courses as they move toward a four-year college program. Others will, after graduating, go directly to work and work-based learning, including apprenticeship.

The box on the right side of Exhibit 6 represents employers and work-based education. Within it, workers pursue learning that continues for a lifetime. This box includes the human resource functions of recruiting, developing, and retaining employees. Workplace education produces portable certificates that are valued in many workplaces.

Information should flow from employers to educators through recruiting and employee development activities, including the ways in which employees progress up career ladders. Educators, in turn, should inform employers of the workplace competencies that students have attained. Today, neither employers nor educators receive or deliver information effectively. The SCANS aim is to improve the information flow (and the learning and earning) so that the economy will deliver the high productivity and wage increases that characterized the United States in the years from 1937 to 1973.

EXHIBIT 7

THE COMMISSION RECOMMENDS FULL IMPLEMENTATION OF THE FOLLOWING ACTIONS BY THE YEAR 2000:

Reinventing Schools

- Workplace know-how (the SCANS foundation skills and workplace competencies) should be taught along the entire continuum of education, from kindergarten through college.
- Every student should complete middle school (about age 14) with an introduction to workplace know-how.
- Every student by about age 16 should attain initial mastery of the SCANS know-how.
- Every student should complete high school sufficiently proficient in the SCANS know-how to earn a decent living.
- All federally funded programs for youth and adults, including vocational education programs, should teach the SCANS know-how.

Fostering Work-based Learning

- Federal, state, and local agencies should incorporate SCANS workplace competencies into their own employee programs.
- Private-sector work-based training programs should incorporate training in the SCANS workplace competencies.
- Coalitions of businesses, associations, government employers, and labor organizations should teach the SCANS competencies to the current workforce, including employees of small businesses.

Reorganizing the Workplace

- The vast majority of employers should adopt the standards of quality and high performance that now characterize our most competitive companies.
- Firms should develop internal training programs to bring employees to the proficiency in the SCANS competencies needed for high-performance work organizations.

Restructuring Assessment

- A national education-based assessment system should be implemented that will permit educational institutions to certify the levels of the SCANS competencies that their students have achieved.
- Public and private employers should define requirements for higher-level competencies.
- Employment-based assessments should permit diagnoses of individual learning needs.

Exhibit 7 outlines the actions that are needed to reach the SCANS goals. Unless the nation takes forceful action on this agenda, the nation's schools, employers, students, and workers will not fare well in the next century.

This, the SCANS final report, provides a blueprint for groups at the national, state, and local levels. Each community must decide what resources will be allocated to create a system that will meet its specific goals. But first, each must become involved in a conversation about its place in a fast-changing world as we approach the year 2000. Our nation's ability to lead in a global economy will depend on the outcome of those conversations. This Commission is confident that once they are informed, communities will commit themselves to maintaining the American dream for themselves and their children.

Career Development Competencies by Area and Level

Self-Knowledge

Elementary	Middle/Junior High School	High School	Adult
Knowledge of the importance of self-concept.	Knowledge of the influence of a positive self-concept.	Understanding the influence of a positive self-concept.	Skills to maintain a positive self-concept.
Skills to interact with others.	Skills to interact with others.	Skills to interact positively with others.	Skills to maintain effective behaviors.
Awareness of the importance of growth and change.	Knowledge of the importance of growth and change.	Understanding the impact of growth and development.	Understanding developmental changes and transitions.

Educational and Occupational Exploration

Elementary	Middle/Junior High School	High School	Adult
Awareness of the benefits of educational achievement.	Knowledge of the benefits of educational achievement to career opportunities.	Understanding the relationship between educational achievement and career planning.	Skills to enter and participate in education and training.
Awareness of the relationship between work and learning.	Understanding the relationship between work and learning.	Understanding the need for positive attitudes toward work and learning.	Skills to participate in work and life-long learning.
Skills to understand, and use career information.	Skills to locate, understand, and use career information.	Skills to locate, evaluate, and interpret career information.	Skills to locate, evaluate, and interpret career information.
Awareness of the importance of personal responsibility and good work habits.	Knowledge of skills necessary to seek and obtain jobs.	Skills to prepare to seek, obtain, maintain, and change jobs.	Skills to prepare to seek, obtain, maintain, and change jobs.
Awareness of how work relates to the needs and functions of society.	Understanding how work relates to the needs and functions of the economy and society.	Understanding how societal needs and functions influence the nature and structure of work.	Understanding how the needs and functions of society influence the nature and structure of work.

Career Planning

Elementary	Middle/Junior High School	High School	Adult
Understanding how to make decisions.	Skills to make decisions.	Skills to make decisions.	Skills to make decisions.
Awareness of the interrelationship of life roles.	Knowledge of the interrelationship of life roles.	Understanding the interrelationship of life roles.	Understanding the impact of work on individual and family life.
Awareness of different occupations and changing male/female roles.	Knowledge of different occupations and changing male/female roles.	Understanding the continuous changes in male/female roles.	Understanding the continuing changes in male/female roles.
Awareness of the career planning process.	Understanding the process of career planning.	Skills in career planning.	Skills to make career transitions.

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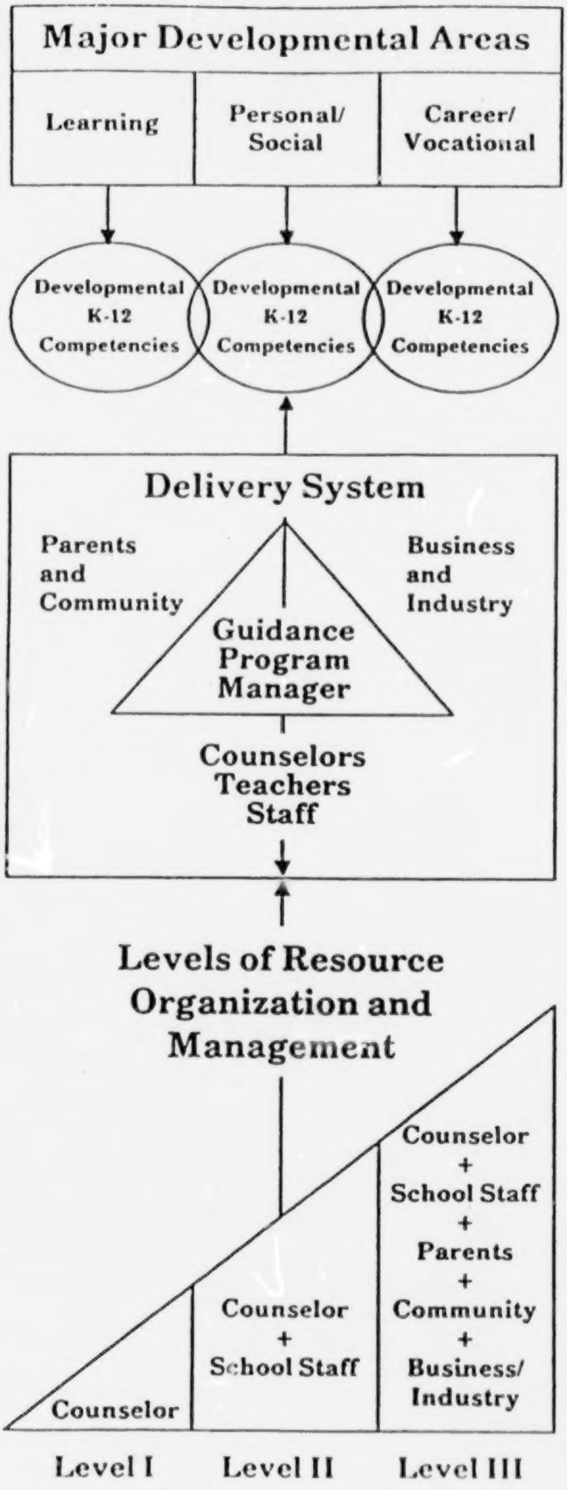
Major Developmental Areas
Learning
Personal/ Social
Career/ Vocational
Developmental K-12 Competencies
Developmental K-12 Competencies
Developmental K-12 Competencies
Delivery System
Parents and Community
Business and Industry
Guidance Program Manager
Counselors Teachers Staff
Levels of Resource Organization and Management
Counselor
Counselor + School Staff
Counselor + School Staff + Parents + Community + Business/ Industry
Level I
Level II
Level III

How the WDGM Works

Major Developmental Areas. The WDGM focuses on three major areas of student development: *Learning, Personal/Social,* and *Career/ Vocational.* These are the types of functional life competencies each person must attain in order to learn, achieve academic success, and prepare for a satisfying and productive career (see graphic at left).

Developmental Student Competencies. Specific student competencies are listed under each major developmental area. The competencies represent basic skills each person should master in order to deal effectively with daily life situations. The competencies are listed across age and grade levels and are consistent with children's general physical and intellectual capabilities at various stages.

Delivery System. The WDGM incorporates counselors, parents, school staff, community members, and business/industry/labor representatives into a guidance program delivery system. The WDGM suggests that the school district guidance program manager organize district resources to address the greatest number of student needs. Guidance program organization and management strategies will be elaborated upon throughout the WDGM.

Resource Organization and Management. Research and experience suggest that developmental guidance is more functional or less functional as levels of resource organization and management rise or fall. Programs in which the counselor is the sole resource provider may be limited. Guidance programs which involve a variety of school staff as well as community/ business/labor/industry members are able to more efficiently help students attain skills and competencies. The key to a successful program is organization and management of guidance providers best suited to assist students in achieving life skills and competencies. It is important to note that the levels of resource organization and management described in the WDGM are cumulative.

Elementary School Student Competencies

Elementary School	**Learning About**
	Understanding
	Applying

Learning

1. Understand the school environment and what is expected of students.
2. Understand strengths, abilities, and how to learn most effectively.
3. Understand relationships among ability, effort, and the quality of school achievement.
4. Understand how to assess learning needs and where and when to seek help.
5. Understand the process of setting meaningful school achievement goals.

Personal/Social

6. Exhibit conflict-resolution skills with adults and peers.
7. Exhibit respect for individual freedoms and rights of self and others.
8. Understand the consequences of actions for self and others.
9. Understand the influence that physical, emotional, and intellectual behaviors have on one another.
10. Be aware of own emotional, physical, and intellectual development.
11. Learn to communicate with peers and adults in various home, school, and community settings.
12. Exhibit positive attitudes toward school, family, and self.
13. Understand the concept of ongoing change in school, home, and community lives.
14. Understand and respect differences among people's cultures, lifestyles, attitudes, and abilities.

Career/Vocational

15. Acquire knowledge about different occupations and changing male/female roles.
16. Become aware of personal interests and preferences.
17. Learn how to cooperate and coexist with others in work and play.
18. Understand what it means to work and how school work relates to future plans.
19. Become aware of worlds beyond the immediate experience

Middle/Junior High School Student Competencies

Middle/ Junior High School	Learning About
	Understanding
	Applying

Learning

1. Develop internal academic motivation.
2. Develop good study skills.
3. Develop a sense of the future and how to move toward it.
4. Understand strengths and abilities and how to learn most effectively.
5. Exhibit problem-solving skills.

Personal/Social

6. Understand physical, emotional, and intellectual growth and development.
7. Develop self and social self-concept.
8. Understand and develop peer relationships.
9. Exhibit positive attitudes toward school, family, and self.
10. Learn to communicate with parents..
11. Learn to cope with life's pressures, challenges, defeats, and successes.
12. Learn to deal with ongoing changes in personal and academic life.

Career/Vocational

13. Understand decision-making skills.
14. Learn to cope with transition in school, home, and community lives.
15. Become informed about alternative educational and vocational choices and preparation for them.
16. Relate personal interests to broad occupational areas.
17. Understand and use communication skills.
18. Learn human conflict management with adults and peers.
19. Learn that sex-role stereotyping, bias, and discrimination limit choices, opportunity, and achievement.

High School Student Competencies

High School	Learning About
	Understanding
	Applying

Learning

1. Understand one's own learning abilities and how best to apply them.
2. Become informed about self through assessment techniques.
3. Learn to set realistic goals and develop strategies to reach them.
4. Understand the school curriculum and the impact course selection will have on future plans.
5. Understand the school environment and what is expected.

Personal/Social

6. Understand physical, emotional, and intellectual growth and development.
7. Learn to cope with change and plan for the future.
8. Learn human-conflict resolution skills with adults and peers.
9. Understand and appreciate one's own capabilities and those of others.
10. Understand personal relationships and how to establish an independent identity.
11. Take responsibility for personal decisions.

Career/Vocational

12. Understand and develop decision-making skills.
13. Understand the world of work and its expectations for employment.
14. Become informed about educational/work alternatives.
15. Understand continuous changes of male/female roles and how this relates to career choice.
16. Develop the interpersonal skills necessary for harmony in the workplace.
17. Become informed about up-to-date employment opportunities during and after high school.
18. Form tentative career goals and strategies to reach them.
19. Understand lifestyle preferences and relate them to occupational interests

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WISCONSIN DEVELOPMENTAL GUIDANCE COMPETENCIES WITH NATIONAL GUIDELINES STUDENT INDICATORS

ELEMENTARY SCHOOL STUDENT COMPETENCIES AND INDICATORS

LEARNING

1. Understand the school environment and what is expected of students.
    a. Identify how behaviors affect school and family situations.
    b. Describe school tasks that are similar to skills essential for job success.
    c. Demonstrate effective study and information-seeking habits.
    d. Demonstrate an understanding of the importance of practice, effort, and learning.

2. Understand strengths, abilities, and how to learn most effectively.
    a. Identify personal interests, abilities, strengths, and weaknesses.
    b. Identify personal strengths and weaknesses in subject areas.
    c. Describe how personal beliefs and attitudes effect decision-making.

3. Understand relationships among ability, effort, and the quality of school achievement.
    a. Describe how academic skills can be used in the home and community.
    b. Describe relationships among ability, effort and achievement.
    c. Identify and assess problems that interfere with attaining goals.

4. Understand how to assess learning needs and where and when to seek help.
    a. Identify academic skills needed in several occupational groups.
    b. Describe how choices are made.
    c. Identify strategies used in solving problems.

5. Understand the process of setting meaningful school achievement goals.
    a. Describe the importance of planning.
    b. Develop an individual career plan for the elementary school level.
    c. Identify alternatives in decision-making situations.
    d. Implement a plan of action for improving academic skills.

PERSONAL/SOCIAL

6. Exhibit conflict-resolution skills with adults and peers.
    a. Demonstrate healthy ways of dealing with conflicts, stress, and emotions in self and others.
    b. Describe the importance of personal qualities (e.g., dependability, promptness, getting along with others) to getting and keeping jobs.
    c. Demonstrate effective skills for interacting with others.
    d. Identify and select appropriate behaviors to deal with specific emotional situations.
    e. Demonstrate skills in resolving conflicts with peers and adults.

7. Exhibit respect for individual freedoms and rights of self and others.
    a. Identify how people are unique.
    b. Demonstrate healthy ways of dealing with conflicts, stress, and emotions in self and others.
    c. Describe the various roles an individual may have (e.g., friend, student, worker, family member).
    d. Describe how family members depend on one another, work together and share responsibilities.

8. Understand the consequences of actions for self and others.
    a. Describe how behavior influences the feelings and actions of others.
    b. Demonstrate appropriate behaviors when peer pressures are contrary to one's beliefs.
    c. Describe what can be learned from making mistakes.
    d. Describe how personal beliefs and attitudes effect decision-making.
    e. Describe how decisions affect self and others.
    f. Describe how choices are made.

9. Understand the influence that physical, emotional, and intellectual behaviors have on one another.
    a. Identify how behaviors affect school and family situations.
    b. Identify sources and effects of peer pressure.
    c. Describe causes of stress.

10. Be aware of own emotional, physical, and intellectual development.
    a. Demonstrate appropriate behaviors when peer pressures are contrary to one's beliefs.
    b. Demonstrate knowledge of good health habits.
    c. Identify how behaviors affect school and family situations.
    d. Identify sources and effects of peer pressure.

11. Learn to communicate with peers and adults in various home, school, and community settings.
    a. Demonstrate group membership skills.
    b. Identify ways to express feelings.
    c. Describe how parents, relatives, adult friends, and neighbors can provide career information.
    d. Describe work-related activities in the home, community and school.
    e. Describe how contributions of individuals both inside and outside the home are important.

12. Exhibit positive attitudes toward school, family, and self.
    a. Describe positive characteristics about self as seen by self and others.
    b. Demonstrate a positive attitude about self.

13. Understand the concept of ongoing change in school, home, and community lives.
    a. Identify personal feelings.
    b. Describe the changing life roles of men and women in work and family.
    c. Describe how contributions of individuals both inside and outside the home are important.

14. Understand and respect differences among people's cultures, lifestyles, attitudes, and abilities.
    a. Identify how people are unique.
    b. Demonstrate awareness of different cultures, lifestyles, attitudes, and abilities.
    c. Demonstrate the ability to work with people who are different from oneself (e.g., race, age, gender).
    d. Describe ways in which work can help overcome social and economic problems.
    e. Describe how work is important to all people.

CAREER/VOCATIONAL

15. Acquire knowledge about different occupations and changing male/female roles.
    a. Describe how the amount of education needed for different occupational levels varies.
    b. Identify different types of work, both paid and unpaid.
    c. Describe work of family members, school pesonnel, and community workers.
    d. Identify occupations according to data, people and things.
    e. Identify the working conditions of occupations (e.g., inside/outside, hazardous).
    f. Describe how parents, relatives, adult friends, and neighbors can provide career information.
    g. Describe the changing life roles of men and women in work and family.
    h. Describe skills needed in a variety of occupational groups.

16. Become aware of personal interests and preferences.
    a. Identify personal interests, abilities, strengths, and weaknesses.
    b. Identify personal feelings.
    c. Identify work activities of interest to the student.
    d. Describe the relationships of beliefs, attitudes, interests, and abilities to occupations.
    e. Describe how work can satisfy personal needs.

17. Learn how to cooperate and coexist with others in work and play.
    a. Identify ways to express feelings.
    b. Describe the importance of personal qualities (e.g., dependability, promptness, getting along with others) to getting and keeping jobs.
    c. Describe the importance of cooperation among workers to accomplish a task.
    d. Demonstrate effective skills for interacting with others.
    e. Demonstrate healthy ways of dealing with conflicts, stress, and emotions in self and others.
    f. Demonstrate positive ways to performing working activities.
    g. Demonstrate the ability to work with people who are different from oneself (e.g., race, age, gender).

18. Understand what it means to work and how school work relates to future plans.
    a. Describe ways to meet personal needs through work.
    b. Describe how academic skills can be used in the home and community.
    c. Identify academic skills needed in several occupational groups.
    d. Describe school tasks that are similar to skills essential for job success.
    e. Describe how current learning relates to work.
    f. Describe how one's role as a student is like that of an adult worker.
    g. Describe ways in which work can help overcome social and economic problems.
    h. Describe how work roles complement family roles.

19. Become aware of worlds beyond the immediate experience.
    a. Describe how the amount of education needed for different occupational levels varies.
    b. Describe the importance of preparing for occupations.
    c. Describe work of family members, school personnel, and community workers.
    d. Describe jobs that are present in the local community.
    e. Describe ways in which self-employment differs from working for others.
    f. Demonstrate the ability to work with people who are different from oneself (e.g., race, age, gender).
    g. Describe the products and services of local employers.

WISCONSIN DEVELOPMENTAL GUIDANCE COMPETENCIES WITH NATIONAL GUIDELINES STUDENT INDICATORS

MIDDLE/JUNIOR HIGH SCHOOL STUDENT COMPETENCIES AND INDICATORS

LEARNING

1. Develop internal academic motivation.
    a. Describe the importance of academic and occupational skills in the work world.

2. Develop good study skills.
    a. Demonstrate effective learning habits and skills.

3. Develop a sense of the future and how to move toward it.
    a. Identify how the skills taught in school subjects are used in various occupations.
    b. Describe how continued learning enhances the ability to achieve goals.
    c. Identify strategies for managing personal resources (e.g., talents, time, money) to achieve tentative career goals.
    d. Describe a plan of action for increasing basic education skills.
    e. Identify personal leisure choices in relation to lifestyle and the attainment of future goals.

4. Understand strengths and abilities and how to learn most effectively.
    a. Describe individual strengths and weaknesses in school subjects.
    b. Describe how skills relate to the selection of high school courses of study.
    c. Demonstrate an understanding of the importance of personal skills and attitudes to job success.
    d. Demonstrate effective learning habits and skills.

5. Exhibit problem-solving skills.
    a. Describe how career development is a continuous process with series of choices.
    b. Identify possible outcomes of decisions.

PERSONAL/SOCIAL

6. Understand physical, emotional, and intellectual growth and development
    a. Describe individual skills required to fulfill different life roles.
    b. Describe changes that occur in the physical, psychological, social and emotional development of an individual.
    c. Describe physiological and psychological factors as they relate to career development.
    d. Describe the importance of career, family, and leisure activities to mental, emotional, physical and economic well-being.

7. Develop self and social self-concept.
    a. Describe personal likes and dislikes.
    b. Demonstrate tolerance and flexibility in interpersonal and group situations.
    c. Demonstrate effective group membership skills.
    d. Demonstrate effective social skills.

8. Understand and develop peer relationships.
    a. Describe how one's behavior influences the feelings and actions of others.
    b. Demonstrate respect for the feelings and beliefs of others.
    c. Demonstrate an appreciation for the similarities and differences among people.
    d. Demonstrate understanding of different cultures, lifestyles, attitudes, and abilities.

9. Exhibit positive attitudes toward school, family, and self.
    a. Demonstrate personal qualities (e.g., dependability, punctuality, getting along with others) that are needed to get and keep jobs.
    b. Describe the interrelationships between family, occupational, and leisure decisions.
    c. Demonstrate respect for the feelings and beliefs of others.
    d. Demonstrate understanding of different cultures, lifestyles, attitudes, and abilities.

10. Learn to communicate with parents.
    a. Describe how the expectations of others affect career planning.
    b. Identify how work roles at home satisfy needs of the family.

11. Learn to cope with life's pressures, challenges, defeats, and successes.
    a. Identify feelings associated with significant experiences.
    b. Demonstrate skills in responding to criticism.
    c. Identify internal and external sources of stress.
    d. Demonstrate ways of responding to others when under stress.

12. Learn to deal with ongoing changes in personal and academic life.
    a. Identify environmental influences on attitudes, behaviors, and aptitudes.
    b. Identify how different work and family patterns require varying kinds and amounts of energy, participation, motivation, and talent.
    c. Identify personal goals that may be satisfied through a combination of work, community, social, and family roles.

CAREER/VOCATIONAL

13. Understand decision-making skills.
    a. Describe personal beliefs and attitudes.
    b. Describe how career development is a continuous process with series of choices.
    c. Identify possible outcomes of decisions.
    d. Identify strategies for managing personal resources (e.g., talents, time, money) to achieve tentative career goals.
    e. Develop an individual career plan, updating information from the elementary-level plan and including tentative decisions to be implemented in high school.

14. Learn to cope with transition in school, home, and community lives.
    a. Describe the importance of work to society.
    b. Describe the relationship between work and economic and societal needs.
    c. Describe the economic contributions workers make to society.
    d. Describe the effects that societal, economic, and technological change have on occupations.
    e. Identify sources to obtain information about occupational groups including self employment.
    f. Identify sources of employment in the community.

15. Become informed about alternative educational and vocational choices and preparation for them.
    a. Describe terms and concepts used in describing employment opportunities and conditions.
    b. Identify advantages and disadvantages of various secondary and postsecondary programs for the attainment of career goals.
    c. Identify the requirements for secondary and postsecondary programs.
    d. Identify school courses that meet tentative career goals.
    e. Describe the skills needed to adjust to changing occupational requirements.
    f. Identify skills that are transferable from one occupation to another.
    g. Identify various ways that occupations can be classified.
    h. Identify a number of occupational groups for exploration.
    i. Demonstrate skills in using school and community resources to learn about occupational groups.
    j. Demonstrate knowledge of academic and vocational programs offered at the high school level.

16. Relate personal interests to broad occupational areas.
    a. Describe the relationship of personal attitudes, beliefs, abilities and skills to occupations.
    b. Describe how aptitudes and abilities relate to broad occupational groups.
    c. Describe school courses related to personal, educational and occupational interests.
    d. Demonstrate knowledge of exploratory processes and programs.
    e. Describe skills needed in a variety of occupations, including self-employment.

17. Understand and use communication skills.
    a. Demonstrate skills to complete a job application.
    b. Demonstrate skills and attitudes essential for a job interview.

18. Learn human conflict management with adults and peers.
    a. Identify ways in which decisions about education and work relate to other major life decisions.

19. Learn that sex-role stereotyping, bias, and discrimination limit choices, opportunity, and achievement.
    a. Describe advantages and disadvantages of various life role options.
    b. Describe advantages and problems of entering nontraditional occupations.
    c. Describe the advantages of taking courses related to personal interest, even if they are most often taken by members of the opposite gender.
    d. Describe stereotypes, biases, and discriminatory behaviors that may limit opportunities for women and men in certain occupations.

WISCONSIN DEVELOPMENTAL GUIDANCE COMPETENCIES WITH NATIONAL GUIDELINES STUDENT INDICATORS

HIGH SCHOOL STUDENT COMPETENCIES AND INDICATORS

LEARNING

1. Understand one's own learning abilities and how best to apply them.
   a. Identify and appreciate personal interests, abilities, and skills.

2. Become informed about self through assessment techniques.
   a. Describe personal strengths and weaknesses in relationship to postsecondary education/training requirements.
   b. Demonstrate an understanding of how individual characteristics relate to achieving personal, social, education, and career goals.
   c. Demonstrate an understanding of environmental influences on one's behaviors.

3. Learn to set realistic goals and develop strategies to reach them.
   a. Identify appropriate choices during high school that will lead to marketable skills for entry-level employment or advanced training.
   b. Describe the relationship of academic and vocational skills to personal interests.
   c. Demonstrate responsibility for making tentative educational and occupational choices.
   d. Identify and complete required steps toward transition from high school to entry into postsecondary education/training programs or work.

4. Understand the school curriculum and the impact course selection will have on future plans.
   a. Describe how skills developed in academic and vocational programs relate to career goals.
   b. Describe how education relates to the selection of college majors, further training, and/or entry into the job market.
   c. Demonstrate how to apply academic and vocational skills to achieve personal goals.

5. Understand the school environment and what is expected.
   a. Demonstrate learning habits and skills that can be used in various educational situations.
   b. Demonstrate positive work attitudes and behaviors.

PERSONAL/SOCIAL

6. Understand physical, emotional, and intellectual growth and development.
   a. Demonstrate an understanding of how individual characteristics relate to achieving personal, social, educational, and career goals.
   b. Describe how developmental changes affect physical and mental health.
   c. Describe the effect of emotional and physical health on career decisions.
   d. Demonstrate knowledge of life stages.

7. Learn to cope with change and plan for the future.
    a. Describe healthy ways of dealing with stress.
    b. Demonstrate behaviors that maintain physical and mental health.
    c. Demonstrate knowledge that changes may require retraining and upgrading of employees' skills.
    c. Describe how education relates to the selection of college majors, further training, and/or entry into the job market.
    d. Demonstrate how to apply academic and vocational skills to achieve personal goals.

8. Learn human-conflict resolution skills with adults and peers.
    a. Demonstrate the ability to use peer feedback.
    b. Demonstrate effective interpersonal skills.
    c. Demonstrate interpersonal skills required for working with and for others.
    d. Demonstrate how to express feelings, reactions, and ideas in an appropriate manner.

9. Understand and appreciate one's own capabilities and those of others.
    a. Identify and appreciate personal interests, abilities, and skills.
    b. Describe personal strengths and weaknesses in relationship to postsecondary education/training requirements.

10. Understand personal relationships and how to establish an independent identity.
    a. Demonstrate an understanding of the relationship between personal behavior and self-concept.

11. Take responsibility for personal decisions.
    a. Demonstrate responsibility for making tentative educational and occupational choices.

CAREER/VOCATIONAL

12. Understand and develop decision-making skills.
    a. Identify alternatives in given decision-making situations.
    b. Identify and complete required steps toward transition from high school to entry into postsecondary education/training programs or work.

13. Understand the world of work and its expectations for employment.
    a. Describe how learning skills are required in the workplace.
    b. Demonstrate skills in preparing a resume and completing job applications.
    c. Describe how occupational and industrial trends relate to training and employment.
    d. Demonstrate an understanding of the global economy and how it affects each individual.
    e. Identify the positive contributions workers make to society.
    f. Demonstrate knowledge of the social significance of various occupations.
    g. Demonstrate occupational skills developed through volunteer experiences, part-time employment, or cooperative education programs.
    h. Demonstrate academic or vocational skills required for a full or part-time job.

14. Become informed about educational/work alternatives.
    a. Demonstrate skills necessary to compare education and job opportunities.
    b. Describe how skills developed in academic and vocational programs relate to career goals.
    c. Demonstrate transferable skills that can apply to a variety of occupations and changing occupational requirements.
    d. Describe the educational requirements of various occupations.
    e. Demonstrate knowledge of various classification systems that categorize occupations and industries.
    f. Describe the concept of career ladders.
    g. Identify individuals in selected occupations as possible information sources, role models, or mentors.
    h. Describe placement services available to make the transition from high school to civilian employment, the armed services, or postsecondary education/training.
    i. Demonstrate an understanding that job opportunities often require relocation.
    j. Describe school and community resources to explore educational and occupational choices.

15. Understand continuous changes of male/female roles and how this relates to career choice.
    a. Identify factors that have influenced the changing career patterns of women and men.
    b. Identify evidence of gender stereotyping and bias in educational programs and occupational settings.
    c. Demonstrate attitudes, behaviors, and skills that contribute to eliminating gender bias and stereotyping.
    d. Identify courses appropriate to tentative occupational choices.
    e. Describe the advantages and problems of nontraditional occupations.

16. Develop the interpersonal skills necessary for harmony in the workplace.
    a. Describe appropriate employer and employee interactions in various situations.
    b. Demonstrate skills and behaviors necessary for a successful job interview.
    c. Demonstrate skills in preparing a resume and completing job applications.
    d. Demonstrate employability skills necessary to obtain and maintain jobs.
    e. Demonstrate a positive attitude toward work.

17. Become informed about up-do-date employment opportunities during and after high school.
    a. Identify how employment trends relate to education and training.
    b. Demonstrate use of a range of resources (e.g., handbooks, career materials, labor market information, and computerized career information delivery systems).
    c. Describe the concept of career ladders.
    d. Describe the influence of change in supply and demand for workers in different occupations.
    e. Describe the impact of factors such as population, climate, and geographic location on occupational opportunities.
    f. Demonstrate skills to locate, interpret, and use information about job openings and opportunities.
    g. Identify specific job openings.
    h. Demonstrate skills to assess occupational opportunities (e.g., working conditions, benefits, and opportunities for change).
    i. Demonstrate knowledge that changes may require retraining and upgrading of employees' skills.
    j. Describe the advantages and disadvantages of self-employment as a career option.

18. Form tentative career goals and strategies to reach them.
    a. Demonstrate responsibility for making tentative educational and occupational choices.
    b. Demonstrate knowledge of postsecondary vocational and academic programs.
    c. Describe career plans that reflect the importance of lifelong learning.
    d. Identify and complete required steps toward transition from high school to entry into postsecondary education/training programs or work.
    e. Identify steps to apply for and secure financial assistance for postsecondary education and training.
    f. Develop an individual career plan, updating information from earlier plans and including tentative decisions to be implemented after high school.

19. Understand lifestyle preferences and relate them to occupational interests.
    a. Describe the effect of work on lifestyles.
    b. Describe factors that determine lifestyles (e.g., socioeconomic status, culture, values, occupational choices, work habits).
    c. Describe ways in which occupational choices may affect lifestyle.
    d. Describe the contribution of work to a balanced and productive life.
    e. Describe ways in which work, family, and leisure roles are interrelated.
    f. Describe different career patterns and their potential effect on family patterns and lifestyle.
    g. Describe the importance of leisure activities.
    h. Demonstrate ways that occupational skills and knowledge can be acquired through leisure.
    i. Demonstrate skills necessary to function as a consumer and manage financial resources.
    j. Describe how society's needs and functions affect the supply of goods and services.
    k. Describe the costs and benefits of self-employment.

Mentorship Program

School of Industry and Technology

University of Wisconsin-Stout
July 1993

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Background

The Mentorship Program in the School of Industry and Technology is part of the overall induction program for instructors new to the University of Wisconsin-Stout. It is an attempt to train, support and encourage faculty members new to the School of Industry and Technology.

The goals of the program are:

1 Integrate faculty members new to the School of Industry and Technology into the university community.

2. Address needs of faculty members new to the School.

3. Strengthen teaching skills of faculty new to the School.

4. Foster development of faculty new to the School.

The Mentorship Program in the School of Industry and Technology is an outgrowth of the overall induction program at the University of Wisconsin-Stout and the efforts of Carol Mooney's 1992 internship project. Carol is a faculty member in the Communications, Education and Training Department who conducted a faculty and administration needs assessment and developed training materials based on the assessment for new staff.

Faculty members new to SIT have told us the assignment of a mentor has been very helpful in their training and induction at Stout. The attempt of this guide is to formalize the mentor program in which new faculty volunteer to commit to a year-long program which includes training, in-service and coaching with a colleague. Experienced faculty members are assigned to a new faculty member and will maintain contact throughout the year.

It is important to remember that the mentor/mentee relationship is a collegial and a confidential one and is not evaluative in nature. The mentors and mentees learn from each other, and research shows that both find significant growth from the relationship. We are very pleased and excited to formalize this mentorship program in SIT and hope there is a positive response from experienced faculty to join in this important project.

Mentoring Is:

"A nurturing process in which a more skilled or more experienced person, serving as a role model, teaches, sponsors, encourages, counsels, and befriends a less skilled or less experienced person for the purpose of promoting the latter's professional and/or personal development. Mentoring functions are carried out within the context of an ongoing, caring relationship between the mentor and mentee."

Role of Mentoring

Teach

Sponsor

Encourage

Counsel

Befriend

Responsibilities of Mentor

The faculty mentor is one of nurturing, teaching and providing support in a new and challenging university environment. The following responsibilities should help guide the mentor.

1. Offer friendship and develop a trusting relationship. Share your experiences as a new faculty member - *empathize.*
2. Accept and promote self-confidence. Present a warm, genuine and caring demeanor. Compliment and encourage frequently when appropriate.
3. Expose the mentee to new opportunities.
4. Encourage creativity.
5. Encourage experimentation (allow for failure).
6. Challenge.
7. Teach technical aspects of the job.
8. Develop cooperative activities.
9. Observe and coach.
10. Share ideas.
11. Involve mentee in professional activities such as professional organizations, curriculum development, graduate classes, in-services, etc.
12. Provide support as the mentee established student and community rapport as a professional educator.
13. Offer expertise in the areas of curriculum and classroom management as needed.
14. Schedule one meeting per week with mentee. Lunches or locations outside the university remove some of the barriers to communication.
15. Remember, the goal is to provide guidance and support. The mentee should naturally move from a dependent to an independent relationship.

Benefits to the Mentor

Some benefits to faculty mentors by participating in this program are:

1. Career Development
2. Emotional Satisfaction
3. Rejuvenation and Creativity
4. Increased Self-Awareness
5. Personal Growth
6. Realization of the significance of the mentor's life and professional contributions.
7. Fulfillment of "generativity" needs (vs. stagnation).

Selection of Mentors

Mentor selection will depend on the needs of the department and the availability of full-time faculty mentors. Mentors should be full time faculty members with at least two year of teaching experience at Stout. Faculty members should have professional and personal/skills which enable them to be honest, tactful and helpful to new SIT faculty members. Mentors should have the time and dedication necessary to devote to being an effective mentor. The department chairperson is responsible for assignment of mentors. Department chairs must assess the mentor's willingness to participate in the program before assignment and orientate the mentor to the process.

Responsibilities of Chairperson

Administrative support and encouragement can greatly enhance the success of the mentorship program. The following should be helpful as department chairs work with mentors and mentees.

1. Be informed as to the roles, procedures, and goals of the mentor/mentee program.
2. Provide information to faculty about the program.

3. Encourage and support faculty new to the School of Industry and Technology to establish rapport with a mentor.

4. Suggest mentors to mentees, and vice versa, if requested and appropriate.

5. Support efforts of the mentor/mentee relationship.

6. Serve as a resource to the mentor program and its participants.

7. Support time for mentor/mentee meetings.

8. Give feedback to mentor program participants for reinforcement or suggestions. Gather information from the mentor program participants (areas of focus, topics covered, perceptions of participants.)

9. Support the confidential relationship between mentors and mentees.

Tips for Effective Mentoring

1. Care about mentees as people by showing empathy, understanding and respect.

2. Establish a warm, genuine and open relationship.

3. Demonstrate interest, helpful intent and involvement.

4. Be a good listener.

5. Establish rapport by remembering personal information about mentees.

6. Be available; keep office hours and appointments.

7. Provide accurate information, if you don't know, find out.

8. Use and refer to available resources.

9. Don't refer too hastily; on the other hand, don't attempt to handle situations for which you are not qualified.

10. Keep in frequent contact with mentee; help them make their own decisions.

12. Focus on mentees' strengths and potentials rather than limitations.

13. Seek out mentee in informal meetings.

14. Monitor mentee's progress toward personal and professional goals.

15. Determine reasons for poor performance and direct mentees to appropriate sources to improve.

16. Collaboratively outline the mentee/mentor responsibilities.

17. Follow through on all commitments made to mentees.

18. Keep an anecdotal record of significant conversations for future reference.

19. Evaluate the effectiveness of your mentoring.

20. Don't be critical of other faculty or staff to mentees.

21. Develop a sense of trust by keeping discussions confidential.

22. Be yourself and allow mentees to be themselves.

Mentor Training Checklist

The following checklist is just a beginning guide in areas you should provide information to the mentee.

Competency Area	**Date Completed**
Effective Teaching Strategies:	
Course syllabi and outlines	
Lesson planning guidelines	
Methods and lesson delivery	
Evaluation and student assessment	
Content specific strategies	
On and off campus resources	
Add/drop procedures	
Advisement and Recruitment:	
Recruiting new students	
Discipline specific advisement guidelines	
Professional Associations:	
Membership, leadership, conference, travel	
Presentations and publications	
Research:	
Applied and theoretical research projects	
Consulting	
Tenure and Promotion Procedures:	
Department tenure and promotion procedures	
University tenure and promotion procedures	
Building a file	

Benefits to the Mentees

1. Instructors will find significant professional and personal growth.
2. Instructors will have an avenue for getting answers to important questions, concerns and needs.
3. Instructors will gain insights and information into effective classroom teaching and management skills.
4. Instructors will be assimilated into the culture of the Department, School, University, community and profession.
5. Instructors will be encouraged and will work with role models to promote their professional well being and career development.
6. Instructor will find personal support and friendship.
7. Promising instructors will remain in the teaching profession.

Benefits to the School of Industry and Technology

1. Revitalizes the whole staff.
2. Empowers faculty when there is shared leadership.

   "...don't lose power when you give it away"

3. Develops instructional leaders.
4. Supports efforts toward a positive University climate.
5. Increases instructors professionalism.

Mentor Program Survey
School of Industry and Technology

This survey is designed to obtain your opinions and perceptions about your mentor ship experience this past year. Your candid responses to these items will assist us in strengthening the Mentorship Program. Please circle the number which best reflects your opinion on each item - 1 lowest and 5 highest. Any comments are welcomed.

Responsibilities	Low				High	Comments
1. I was able to help my mentee carry out his/her duties and responsibilities to the University	1	2	3	4	5	
2. I provided instructional strategies consistent with the School	1	2	3	4	5	
3. I was able to help my mentee utilize university services.	1	2	3	4	5	
4. My mentee was able to communicate his/her needs and desires concerning the School, University and community to me.	1	2	3	4	5	
5. I met with my mentee on a consistent basis.	1	2	3	4	5	
6. I reviewed some of the course materials prepared by my mentee.	1	2	3	4	5	
7. I was able to provide guidance regarding content.	1	2	3	4	5	
8. I feel I was a factor in my mentee become effective in the classroom.	1	2	3	4	5	
9. I was able to give my mentee information about what is happening in the department and school.	1	2	3	4	5	
10. I was able to help my mentee become aware of staff development opportunities.	1	2	3	4	5	
11. I visited my mentees classroom.	1	2	3	4	5	

Over

12. The aspects of the Mentorship Program that I felt most helpful doing were . . . .

13. The aspects of the Mentorship Program that I felt least helpful doing were . . . .

14. I felt I needed additional assistance with . . . .

15. Please write any other comments or suggestions below.

References:

1. Bragar, M. C., (1992) ***Mentoring: Building Strategic Alliances,*** 1992, Manager, Career & Organization Development, Avery Dennison Corporation, Framinghman, MA.

2. Geiger, A., H. (1992) ***Measures for Mentors,*** Training and Development, February.

3. Mooney, C. (1992) ***A Training and Induction Program for New University Faculty,*** Paper Submitted, University of Minnesota, St. Paul, MN.

4. Schoenfeld, A. C. & Magnan, R., (1992) ***Mentor In A Manual: Climbing the Academic Ladder to Tenure,*** Magna Publications, Madison, WI.

Measures for Mentors

Mentoring can't be quantified by t-tests. So how do you measure its results? Here is a mentoring evaluation method that is both a learning tool and a measurement tool.

By Adrianne H. Geiger

In the rush of doing business, staying competitive, and watching costs, employee development activities at many companies become suspect. They fall prey to cost-cutting strategies and drop lower on the list of priorities—even in progressive companies that regard people as their "most valued assets."

Douglas Aircraft in Long Beach, California, is keeping its employee development programs alive—despite layoffs, contract losses, and cash-flow problems.

In 1990, parent company McDonnell Douglas launched People Policies. They form the cornerstone of the company's human resource activities.

The policies emphasize the importance of continuous learning, improvement, and innovation. Their goal is to motivate employees to learn, grow, and develop—or as the policy states, to make McDonnell Douglas a place where "great people grow and prosper."

"Every employee at McDonnell Douglas has responsibility for implementing the policies. And each has a personal stake in their success," says John McDonnell, chairman and CEO. "Employees' incentive and commitment seem to weather the ups and downs of business cycles."

New strategies

At Douglas Aircraft, lean times have fostered a results-oriented mindset. Part of surviving depends on setting clear performance goals and being able to measure results.

General managers now include people development as part of their performance goals. The next step is to ask, "How will I measure the results? How will I know if the time expended was worth the cost? What can I do to improve the effort?"

Some vice-presidents even demand that their general managers make distinctions in measurement between acceptable performance and exceptional performance.

Human resource professionals have always tried to measure and validate the benefits that their efforts bring to a company. But many skills associated with being a good manager—including the skills required for employee development—are difficult to quantify. So the HRD specialists at Douglas Aircraft faced quite a challenge when general managers asked us for help in defining and measuring their efforts to develop people.

Mentoring is one area in which we now have a process for tracking our program's effectiveness.

The mentoring policy

One of the 12 People Policies at McDonnell Douglas is called, "Career Counseling and Mentoring."

Its objective is "to enable people to contribute fully over the course of their careers, by providing periodic formal reviews of their individual career objectives and by providing informal mentoring support."

The policy describes mentoring as a two-way process that is important to career development. "Each person should seek to be a mentor and each person should try to have one or more mentors."

As the mentoring policy was communicated down through the company, employees at every level began asking, "What do I need to do to be a mentor?"

A previous effort

In the past, we'd instituted a pilot program on mentoring for 31 of the company's top performers. The initial workshop was a success.

Each participant had a multi-rater instrument completed by his or her boss, subordinates, and peers.

The feedback data seemed to be useful. Participants received accurate, comprehensive information on their managerial performance. And they gave us positive feedback on our choice of instrument.

We thought we had launched a successful mentoring effort. We had good information with which to begin mentoring discussions. And several mentor relationships prospered.

But as time passed, reorganizations, layoffs, and business pressures overshadowed the mentoring program. Many mentor relationships fell by the wayside.

As one employee said, "We had a pleasant time sharing stories. But I don't feel I got anything out of it that made me look at work differently."

Clearly, we had to devise a way to measure the results of mentoring.

A tool for measuring results

The first step in creating an appropriate means to measure the results of mentoring was to define the term. We pored over the vast amount of mentoring literature for definitions that best fit our goals.

People involved in the task rated definitions, based on how practical and how applicable they were. The breakthrough came when Rudy Bess at Douglas Aircraft in St. Louis provided an article on mentor roles. The role descriptions gave us a place to start. And they helped managers understand what

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Geiger *is a senior staff consultant in organizational and management development for Douglas Aircraft Company, 3855 Lakewood Boulevard, Long Beach, CA 908[illegible]*

might be expected of them as mentors (See the sidebar "Mentor Roles in Career Development."

It's easy to measure the number of mentor relationships in your company But it's not so easy to measure the expectations of people in those relationships

We decided to base our evaluations on job performance and career enhancement. "Mentorees" use a written form to evaluate mentors on two aspects of mentoring:

- the roles the mentor fulfilled best
- the effects of the mentor/mentee discussions.

We asked participants to discuss the evaluation form early in their mentoring discussions. We wanted them to know the rules and to understand how the mentoring process would be evaluated.

Mentor Roles in Career Development

Writing role descriptions for mentors is a useful start to the process of planning a mentoring program with built-in evaluation. Douglas Aircraft's program began with seven role descriptions:

Communicator

- encourages two-way exchange of information
- listens to career concerns and responds appropriately
- establishes an environment for open interaction
- schedules uninterrupted time to meet with mentoree
- acts as a sounding board for ideas and concerns.

Counselor

- works with mentoree to identify and understand career-related skills, interests, and values
- helps mentoree evaluate appropriateness of career options
- helps mentoree plan strategies to achieve mutually agreed-upon goals.

Coach

- helps to clarify performance goals and developmental needs
- teaches managerial and technical skills (OJT)
- reinforces effective on-the-job performance
- recommends specific behaviors that need improvement
- clarifies and communicates organizational objectives and goals
- serves as a role model to demonstrate successful professional behaviors—leads by example.

Advisor

- communicates the informal and formal realities of progression within the organization
- recommends opportunities for training
- recommends appropriate strategies for career direction
- reviews developmental plan on a regular basis
- helps mentoree identify career obstacles and take appropriate action to overcome them.

Broker

- expands the mentoree's network of professional contacts
- helps bring together mentorees who might mutually benefit from helping each other
- helps link mentoree with appropriate educational and employment opportunities
- helps the mentoree identify resources required for career progression.

Referral Agent

- identifies resources to help mentoree with specific problems
- follows up to ensure effectiveness of resources.

Advocate

- intervenes on the mentoree's behalf and represents his or her concerns on specific issues to higher-level managers
- arranges for mentoree to participate in highly visible activities within the organization and outside of it.

(Adapted from the article, "Training Managers for Their Role in a Career Development System," by Zandy B. Leibowitz and Nancy K. Schlossberg, *Training & Development Journal,* American Society for Training and Development, July 1981. To order, call Customer Support, 703/683-8129.)

The evaluation method is as much a learning too! as it is a measurement tool. It provides a framework for the mentor and mentoree to discuss the importance of performance improvement. It describes specific actions and behaviors that each participant can identify, look for, and use. It provides immediate feedback in a relatively low-risk environment. And both mentor and mentoree can use it to examine and assess the relationship.

(See the sidebar, "A Mentoring Evaluation Tool," for an example of an evaluation form for mentoring relationships.)

We make it clear from the beginning that not all mentoring relationships are successful. Anyone may choose to stop taking part in the mentoring process at any time.

Success factors

Mentoring takes many forms. It can be informal or formal, planned or spontaneous. Planned mentoring programs, such as ours, should let people know what is expected of them when they become involved in a mentor relationship.

We define mentor roles at the outset. We communicate ways in which mentors can advise and counsel people. We provide descriptions of roles, actions, and behaviors for mentoring. And we hold discussions on people's expectations and on the ways results are to be measured. We show mentors how to become more effective.

Human interaction is perceived subjectively. People may not agree on what roles mentors should play. And they may not agree on what the results of mentoring should be. But the role descriptions provide a framework and starting point. Participants can use that framework as a basis for discussing the possible benefits of mentoring.

The benefits

Employees who perform well spend time evaluating their performances in their jobs. They rehearse, play their performances back, and improve with experience.

Mentors can play an important role in developing effective performers. Mentors listen, ask questions, provide insight, collect data by observation.

and give feedback.

After two years of the program, not everyone in the company is mentoring or being mentored. But the mentoring concept has become part of the everyday language. And several parts of the company have active areas of planned, formal mentoring.

At Douglas Aircraft, a planned, effective program of evaluation has helped mentoring to become a strategy for improving job performance. ■

A Mentoring Evaluation Tool

What follows is adapted from a questionnaire used to evaluate mentor/mentoree relationships at Douglas Aircraft.

The questionnaire is filled out by the mentoree, who first is asked to provide basic biographical information (name, department, and so forth.

Evaluation of mentoring relationship

The first two questions of this section ask the mentoree how often he or she has been meeting with the mentor and how committed the mentor has seemed to the time spent together.

The questionnaire then goes on to ask about the variety of roles a mentor plays. The employee is asked to evaluate the kind of help received from the mentor, by marking each of ten statements on a continuum that rates the mentor's efforts as follows: significant help, modest help, little help, and no help.

The seven roles are the same ones described in the sidebar, "Mentor Roles in Career Development." The statements:

- **Communicator.** My mentor encouraged a two-way exchange of information and acted as a sounding board for my ideas and concerns.
- **Counselor.** My mentor helped to interpret and clarify the organization's culture, political structure, and vision.
- **Coach.** My mentor gave specific interpersonal feedback and served as an independent third party to clarify my thinking on such items as performance goals and developmental needs.
- **Advisor.** My mentor provided information about career opportunities and options and suggested appropriate strategies
- **Broker.** My mentor acted as an agent or go-between, to locate appropriate resources and contacts.
- **Referral Agent.** My mentor identified resources to pursue for more information.
- **Advocate.** My mentor intervened on my behalf and represented my concerns to higher-level managers.
- **Other Roles.** (please specify)

Results of mentoring discussions

This section looks at the effects that discussions with the mentor have had on various areas of the employee's development. The mentoree is asked to respond to the statements listed below, by marking each on a continuum of the following scale: high impact, medium impact, low impact, no impact.

The areas on which the mentoree is asked to respond:

- a better understanding of the workings of the organization
- an expanded network of professional contacts
- a wider range of topics on which to communicate
- more self-confidence and a better awareness of the mentoree's contributions
- more knowledge of the mentoree's work and its technical requirements
- more specific information about the mentoree's management style
- more accurate feedback about how customers perceive the mentoree
- insight and information on solving problems
- insight and information on performance improvement
- insight and information on managing more effectively
- other (please specify)

Wednesday, June 22, 1994
8:00-9:15
Authentic Assessment - Strategies and Tools

Part One - The Process of Assessing Programs

Department Meetings

Who Should Attend?

Wisconsin Learner Goals, Outcomes and Assessment (Special
Section) Copies have been free of charge
Wisconsin Department of Public Instruction]
125 South Webster Street
Madison, WI 53707-7841

Appendix A

Willard Daggett - Preparing Students for the 1990's and Beyond
$45.00 / International Center for Leadership in Education
Distribution Center
6 Concord Street
Scotia, New York 12302

Simulation - Need course descriptions for each department

Discussion

Conclusions

Part Two - Task Assessment

Assessment vs. Evaluation

Beliefs - "We believe that Assessment should be in constant partnership with the teaching/learning process, and should guide instruction." (Middleton-Cross Plains Area School District)

Starting With the End

Designing the Asessment
- Authentic?
- High Quality Content?
- Engaging?
- Higher Level Thinking Skills?
- Multiple Intelligences/Learning Styles
  - If The Shoe Fits...How to Develop Multiple Intelligences in the Classroom by Carolyn Chapman
  - The Way We Were...The Way We Can Be by Ross and Olsen

    Skylight Publishers
    200 East Wood STreet, Suite 274
    Palatine, Il 60067
- What the Consequences of Using This Assessment?
- Fair?
- Meaningful?
- Resources?
- Cost?
- Who is Involved in the Design?

Teacher-Made Tests

Anecdotal Records

Journals (Reflection)

Interviews/Conferences

Checklists
- Class
- Individual

Rubrics

Assessing Student Outcomes by Marzano, Pickering, McTighe
$13.95 Association for Supervision and Curriculum
Development
1250 N. Pitt
St. Alexandria, VA 22314

Portfolios

- Collection
- Showcase
- Student Assessment
- Career Portfolio
  - Catherine Chew
  - Tech Prep Coordinator
  - MATC-Madison
  - 211 North Carroll STreet
  - Madison, WI 53703

How to Assess Thoughtful Outcomes by Kay Burke
Skylight Publishers
200 East Wood Street, Suite 274
Palatine, Il 60067

Reliability/Consistency

- Giving you good information?
- Can you describe what students have learned?
- Strengths and Weaknesses?
- Purpose?
- Could student self assess?
- Another Assessor?

Revise/Revise/Revise

SCHOOL IMPROVEMENT: STRATEGIES FOR CHANGE

Ed Biggerstaff

PRESENTED TO THE APPLIED/INTEGRATED CURRICULUM CONFERENCE

UW-STOUT

June 22, 1994

(This presentation is being shared with conference participants. Please do not duplicate)

SCHOOL IMPROVEMENT: STRATEGIES FOR CHANGE

JUNE 22, 1994

There is an old Chinese proverb that says, UNLESS YOU CHANGE DIRECTION, YOU ARE LIKELY TO ARRIVE AT WHERE YOU ARE HEADED.

Change is transformative - you may create a change in a system, or you can create a change of a system. A school is a system, a social system.

Change is also the mother of discontent. As educators you are here to gain increased understanding in introducing a tech prep and integrated applied curriculum into your institutions. You are also here to develop your capacity as trainers and leaders in the Tech. Prep. consortiums. This vision involves change. The key is to how to effect positive change to achieve the goals of the organization with minimal discomfort to the players. For the next several minutes we will address the dynamics of change, how to manage change and the leadership style essential to creating change in a work environment of the 1990's.

Let us look at what exists in every organization, be it corporate or a school, or a college. Every organization possesses four fundamental elements: tasks, structure, technology and people.

1. An organization exists for the purpose of achieving goals by accomplishing certain tasks. In schools it is to provide state-of-the-art and current education to students in order to assist them to become productive citizens living a satisfying life.

2. In order to achieve the task, we give our organization structure. A system of authority, communication networks, policies, reward systems, planning systems, a mission statement, etc.

3. Our organization must have technological resources, or tools of the trade. This not only includes hardware items such as computers, wall boards and markers, textbooks, but systematic procedures and activities to solve problems.

4. Then our organization requires people - the greatest renewable resource.

When changes in an organization occur, all of the above ingredients become interdependent and effected. When you change one part of a system, it affects other parts. Consequential.

SCHOOLS ARE SOCIAL SYSTEMS, therefore they contain a climate or environment in which we exist. The climate contains mores, values, beliefs, traditions, legends and myths, and traditional expectations that have a great deal to do with the success and failure of efforts to introduce change. This culture transcends over a long period of time and is handed off to new members of the organization. Think of your own institution. Think of your own personal legacy when you leave the organization. What is it that you want to leave behind? What is it about your school that you wish to remember forever?

I would like to offer up some general principles of change for you to consider as you examine the incorporation of new curriculum within your institution.

1. Change involves people - the human needs of others, which includes attitudes, habit patterns, safety and security needs, social affiliations, self extensions. Administrators and other school leaders at any level must be cognizant that they are dealing with more than a "good idea".

2. Change involves leadership at all levels - formal and informal, various hierarchies of the organization from board to students. Those who are effected, are those who should participate in the process of change. Empowerment, using power wisely, and collaboration. What mechanisms should we use?

3. Leadership directed towards change involves a sensitive and complex weaving of relationships. Preferences are facts. Interpersonal fusions (relationships) are the bonds that cement organizations together.

4. As you initiate change in an organization, look for the most significant linkages in keeping an organization healthy and productive: communication and decision making processes. Also, determine the extent of resiliency, coordination and adaptability in your organization. Determine the extent to which people already buy into common goals and standards. What are the common bonds that hold the members of your institution together?

5. Plan ahead - it puts the odds of success in your favor. Develop a blueprint for progress and the future.

6. Move to consequential thinking - be aware of all opportunities to think through "what-ifs". Learn to strategize.

7. Significant changes arise from dreams of persons (a teacher, an administrator, a student, a board), A VISION, IF YOU WILL. It comes about as a result of an examination of what is presently, and what it can be. A vision is a realistic, credible, attractive future for an organization. It is an articulation of a destination toward which your school should

aim; a future that in important ways is bettered, more successful, or more desirable than what your school is doing today.

THE RIGHT VISION MOVES PEOPLE TO ACTION AND BECAUSE OF THEIR ACTION, AN ORGANIZATION AND DESIRED OUTCOMES IMPROVE OR MAKE PROGRESS. IT IS A POWERFUL IDEA. FUTURE ORIENTED. A FOCUS FOR CHANGE. IT IS NOT THE WHY (PURPOSE); IT IS THE WHAT (A HOPE/DREAM).

a. The right vision attracts commitment and energizes people.

b. The right vision creates meaning in peoples lives.

c. The right vision establishes a standard of excellence.

d. The right vision bridges the present and the future. It creates a future while rewarding the certitude of the past.

LET US TURN TO THE DYNAMICS OF ORGANIZATIONAL CHANGE:

A. The perception of change:
   1. It is frequently seen as a threat to one's existence in an organization, or ones self concept.

2. It may be viewed as not feasible: time constraints, lack of support, lack of facilities, inability of others to learn and adapt.

3. It is seen as a disruption of "zone of security". Rules, policies, past practices become habits relied on by others for guidance and protection; person begins to feel vulnerable.

4. It is seen as threatening social relationships; loss of familiar others; loss of safe emotional outlets; loss of reference points against which to assess behavior (cliques).

5. It is seen as a threat to vested interests (real or imagined) and power sources.

6. When change comes from an external power source, the person perhaps feels threatened regardless of the quality of the initiative, the idea.

7. It goes against well established values held by others, and inherent in the organization.

8. Reluctant administrators and managers - "scarcity mentality". Their sense of personal worth always

has to come from a contest with the rest of humanity. Threatened by competency around them. Talk the game, but don't walk the game of empowerment.

9. Many people have had so little intrinsic satisfaction in their work environment that they have adapted their work and lifestyle to find satisfaction mostly off the job. They don't want to be empowered.

B. Resistance is more likely to occur:

1. When people are unfamiliar with relevant facts or reasons for the change.

2. When the consequences of the changes are not seen as beneficial to people.

3. When it is difficult for people to relate to either the change, or the change agent(s).

4. When the change was not sought by the person(s).

C. How can we create readiness for change - organizations tend to remain the same - change doesn't occur without some discomfort. DISCUSS BRIEFLY ENTROPIC PROGRESSION OF ORGANIZATIONS.

1. Unfreeze the organization and create dissatisfaction with the organization as it exists so others are motivated to change. THIS IS CALLED PRODUCTIVE DISSATISFACTION AND CAN LEAD TO PRODUCTIVE CHANGE RATHER THAN CRITICISM.

   a. Comparison with referents - performance figures, questionnaire responses, comparative data are examples.

   (1) Comparative referents - comparison with other similar organizations (we are doing worse than our competition or other schools seem to be making significant progress in integrating their curriculum. Are we keeping UP? Are we ahead?).

   (2) Ideal referents - comparisons with an idealized standard, or the best condition that could exist. (We need to maximize our performance standards. We need to teach students ideas that are basically applied to life.).

(3) Goal referents - comparison with the stated goals of the school (We have not achieved the goals we set for ourselves).

(4) Improvement referents - comparisons with the past performance, or standards, or practices of the organization. (We are not as current as we used to be - let us look at curriculum needs that drive us into the year 2000).

(5) Trait referents - comparison with characteristics valued by the school (We do not have the values or characteristics in our school that we desire)

(6) Stakeholder demand referents - comparison with expectations held for the school by certain interest groups (citizens, parents, board, legislature, etc.).

b. Personnel changes - introducing new people into the organization with fresh ideas. Integrate people into the socialization process of the school culture; on the other hand, socialization may wipe out freshness. Bringing in consultant, or persons who have been successful in their initiatives of similar requirements.

c. Creation of new language - use a different language to describe old realities and practices. Help to change people on how they think about their work, and what they do. (New language - failure is now a false start, blooper, mistake, bungle, disappointment).

d. Development and training of personnel - the most recalcitrant individuals in organizations are those who feel they have no options, but continue present behavior.

e. Identification of external threats - create a readiness to change by identifying factors in the outside environment that threaten the well being of the organization, or its members.

f. Articulating a vision - we have already discussed - a vision gives direction.

g. Generating commitments for change.

    1. Ensuring public comments
    2. Encouraging participation and involvement
    3. Setting effective goals
        (a) goals need to be specific
        (b) goals need to be set by participation
        (c) goals must be challenging
        (d) goals must be set so that feedback follows efforts
        (e) goals are more likely to be accomplished if there is a valued reward for attaining the goal

h. Selecting and socializing key people - identify key people (politically, expertise in idea, etc.) and set to work to socialize these people for buy-ins.

i. Start with simple successes

LET US NOW DISCUSS FOUR STAGES OF LEADERSHIP FOR SCHOOL IMPROVEMENT:

The leadership route to school improvement normally comprises four stages with increasing value for change to occur. You can begin this process at any stage, depending upon the preceding stages that are, or are not in place.

1. Initiation - getting started - a time of bartering. The wants and needs of leader and follower are exchanged.

2. Uncertainty - (muddling through) - Here you are building where the focus is on arousing the potential of others and raising expectations of the outcomes and persons in position to achieve outcomes.

3. Transformative - (breakthrough) - Bonding and inspiration. This arousing of awareness of benefits of change elevates school goals and purposes to the level of shared covenants that bind leadership and followership together.

4. Routinization - (remote control) - banking. The school improvement program becomes real only when it becomes institutionalized as part of everyday life.

THE FOLLOWING GENERALIZATIONS WILL TEND TO FACILITATE A MORE RAPID ADOPTION OF CHANGE, OR SCHOOL IMPROVEMENTS:

a. Relatively little new behavior is required as most of the existing behavior may be retained.

b. The change is directed toward meeting needs that the participants in the organization already recognize and, preferably, have already tried to meet.

c. The change promises practical payoffs in terms that are meaningful to the participants. This could be money, prestige, recognition, or satisfaction from achievement.

d. The change is introduced within the existing local power structure, utilizing local leadership, and respecting important local customs and traditions.

e. Those who are expected to implement the change are involved from beginning to the end, from planning through to evaluation.

f. Provision is made for a free flow of two-way communication between those responsible for managing the change and those expected to implement the change.

g. The managers of the change effort are flexible.

h. Provision is made for maintaining and supporting the change in the organization over time as it passes from the experimental stage to becoming part of regular operations.

i. Relevant information is provided participants.

j. There is a nonevaluative period of time after the changes.

k. Keep it simple as possible.

l. Timing is everything for changes to be successful.

m. Work with informal leadership.

n. Use effective avenues of appeal

o. Participants feel they have control over change (perhaps implementation rather than decision to change).

p. Show how school/organization can become more attractive.

q. Show empathy with other viewpoints regarding the nature of the change.

r. Show how change reduces burdens rather than increasing them.

s. Demonstrate desirable values of change - improved services - quality education.

BEST COPY AVAILABLE

Educators today are highly motivated to restructure schooling but progress has been painfully slow. Why have schools changed so little?

a. Lack of vision
b. Lack of plan
c. Lack of resources
d. Lack of support

Research over the past few years indicates that effective schools (restructuring) are high in participation,have a positive climate, low student-teacher ratios, and high cost effectiveness goals.

LEADERSHIP FOR A SYSTEMATIC CHANGE:

1. Form a school improvement management team-plan, coordinate and manage the school change process.

2. Raise awareness - series of awareness raising activities before assessment.

3. Collecting baseline data - student achievement and satisfaction, etc.

4. Comprehensive assessment - collect needed data from students, teachers, consumers, etc.

5. Interpreting the data - summarize and distribute.

6. Formulate a school design statement - a set of specifications for change - to 21st century.

7. Priority setting and planning - priorities and interventions that would kill the change.

8. Task force organization and coordination - for each priority.

9. Summative evaluation and reporting -

As we move to the management of schools and colleges in the 20th century, we need to examine and rethink our style of leadership. Leadership that balances stability with adaptation; security with risk taking.

For several years now, I have been strongly advocating moving to a stronger stance of transforming rather than transacting with our leadership/followership roles. An effective balance.

As transactional leaders we motivate followers by exchanging with them rewards for services rendered - exchanging valued things - wages, praise, promotion, loyalty, etc.

A transformational leader recognizes the above, but goes further by arousing higher order needs in others. When you elevate people's self esteem, you also elevate the quality of an institution. You motivate others toward improvement and change by providing opportunities for them to satisfy their needs for existence (safety and security); relatedness (love and affection); and needs for growth (self esteem and self actualization). Transformational leaders encourage followers to transcend their own self interest for the good of the group.

The transformational leader is able to conceptualize a specific future, empowers followers by delegating appropriate authority and responsibility, understands the character and sentiment of followers, able to motivate others through clarification of expectations, and build trust and openness through personal behaviors.

Qualities that characterize the transformational leader:

1. Charisma - ability to arouse involvement; intimacy; intensity. Empowering others.

2. Inspiration - emotional persuasion and increasing followers understanding of mutual goals.

3. Individualized stimulation - encouraging others to take risks, be self directed.

4. A clear sense of purpose - long term pictures.

5. Ability to attract others - high ideals, loyalty, emotional maturity.

6. Self knowledge - aware of ones own strengths and weaknesses, and to maximize them.

7. A love of work.

One of the most important things administrators and teachers have to work on is the interception of entropy. Entropy used loosely is a law of thermodynamics. Everything has a tendency to deteriorate. We need to recognize the signals of impending deterioration.

Some of these signals are:

-A tendency toward superficiality

-A dark tension among key people

-No longer having time for celebration and ritual

-A growing feeling that rewards and goals are the same thing

-When people stop telling tribal stories or cannot understand them

-When problem-makers outnumber problem-solvers

-Leaders who seek to control rather than liberate

-When the pressures of day-to-day operations push aside our concern for vision and risk

-An orientation toward the dry rules of school rather than a value orientation which takes into account such things as contribution, spirit, excellence, beauty, and joy

-When people speak of students as impositions on their time rather than as opportunities to serve

-Leaders who rely on structures instead of people

-A loss of confidence in judgment, experience, and wisdom

-A loss of grace and style and civility

References

Clark, Clark and Campbell. Impact of Leadership

Covey. Principle Centered Leadership

Dupree. Art of Leadership

Nanus. Visionary Leadership

Neale, Bailey and Ross. Strategies for School Improvement

Sergiovanni. Value Added Leadership

Roles of the Integrated and Applied Curriculum Leadership Cadre 1994-95

- **Continue to Support the Leaders and Further Develop Tools Necessary to Expand Integrated and Applied Curriculum Efforts Within Each Consortium**

- **Every Cadre Member Working in Conjunction With Their Tech Prep Coordinator Will Use Their Training to Train Others Within Their Consortium at Least Twice During the 1994-95 School Year (1 Each Semester)**

- **Technical Assistance Will be Provided (By the Project and the State) to the Leadership Cadre as Each Team Conducts Training Within the Consortium**

- **The Project Will Develop a Data Base Which Will; (1) Profile Background, Experience, and Specialties of Cadre Teams, (2) Clearinghouse for Facilitators of Integrated and Applied Staff Development, and (3) Catalog and Retrieve Uniform Tasks**

- **With Strong Business and Industry Involvement, the Project will Facilitate the Generation and Validation of a Set of Prototype Tasks to Serve as Benchmarks for the Work of the Cadre**

- **As the Project Provides Training in Integrated and Applied Curriculum Development for Teacher Educators, Linkages will be Created Between Cadre Members and Teacher Educators Within Their Geographic and Certification Areas**

- **In Addition the Project Will Provide Opportunity for New Educational Staff to Become Involved With Integrated and Applied Curriculum Development Based on the WI Educational Goals, Outcomes, and Assessment System**

TASK

You are group of educators from a variety of disciplines who want to effect curricular change (*Integrated and Applied Curriculum*) in your school. You have been provided with expected student outcomes, basic theory and concepts necessary to effect curricular changes, and examples of various processes and techniques to develop and implement *Integrated and Applied Curriculum*. You must develop a *strategic plan* to guide your activities and an *action plan* detailing how and when curricular changes will be accomplished.

TIME

1 Day--June 23, 1994. Plans are due the end of the last session.

ASSESSMENT RUBRIC

Your plan will be assessed based on a 4 point rubric.

4--Fully developed strategic plan with accompanying action plan to carry it out.

3--Partially developed strategic and action plans with some goals identified along with plans to achieve them.

2--Identified some goals with some general indications about how to accomplish them.

1--Few goals established with little or no thought about how to accomplish them.

STRATEGIC PLANNING QUESTIONS

1. Has your district engaged in a strategic planning process?

2. Do you presently have a strategic plan in place?

3. Did the process involve all the necessary players?

4. Did the planning utilize a quality process?

5. Did the planning take into consideration the impact of technology, globalization, economics, and the future.

6. Does the strategic plan have priority over all instructional expenditures in your district?

7. Is it reviewed or revised annually?

ACTIVITY GUIDELINES

Let us assume that your "team"/consortium of educators representing various school levels is requested to develop a vision for curriculum change. The vision is the creation of an organization or federation of schools and/or districts to establish a Tech Prep and integrated/applied curricula.

Develop a plan of strategies for establishing an organizational climate open to changes necessary to implement this new curriculum. This may include tasks, structure, technological resources and personnel. How can you go about establishing a system among the schools focused upon a successful partnership at all levels, where the goal is the implementation of such an educational offering of activities.

Discuss the values and present organizational climate(s) that govern behavior and decision making in your present work situation. What are the operating strengths and weaknesses of the institution(s) to allow changes to occur? On what basis can you defend your strategy for change? What leadership improvements are necessary to accomplish this goal?

Do the key people in the organizations involved in implementing the new curricula know where the organizations are headed and agree on the direction? Do the structures, policies, personnel, incentives and information systems support the potential of such a significant change in curricular offerings?

Strategic Planning
in the
Edgerton School District

The Board of Education adopted Strategic Planning as one of its 1992-1993 District Goals. The work of the Strategic Planning Team is in draft form and will be presented to the Board for its approval.

BOARD OF EDUCATION

James E. Viney, President
Brian J. Donnelly, Vice President
Mary L. Bergendal, Clerk
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Susan M. Ziegler, Member

Dr. Norman L. Fjelstad, Superintendent

WHAT IS STRATEGIC PLANNING?

Strategic Planning is a process for creating an organization's long-term future. It deals with growth and change; is concerned with the whole system; and is driven by the vision of staff and community members. It results in a common purpose, a common sense of direction, priorities for change, and a blueprint for action.

STRATEGIC PLANNING TEAM MEMBERS

Mary Bergendal	School Board Member	Lois Livick	Elementary Teacher
Vicki Brown	Secretary/Community Elem.	Julie Lyerla	Community Leader/Parent
Norman Burdick	Community Leader/Retiree	Todd Mann	Elementary Principal
Brenda Carroll	EESS Representative	Larry Miller	Middle School Principal
Barb Collins	EESS Representative	Ricki Nehs	High School Teacher
Janis Cone	High School Student	Beth Oren	School Board Member
Bill Connor	Elementary Teacher	Mary Oren	Community Leader/Parent
Marie Dorie	Special Education Director	G. David Patrick	Middle School Teacher
Gary Ertl	High School Teacher	Eric Peterson	Community Leader/Parent
Diane Everson	Community Leader	Kathy Rohde	EEA Representative
Sam Fuchs	High School Student	Gwen Schultz	Business Office
Paul Furseth	School Board Member	Jim Schultz	High School Teacher
Mary Gallup	EEA Representative	Richard Schultz	Community Leader
Jeff Gibson	High School Principal	Linda Smejkal	Curr./TAG Coordinator
Marilyn Hagen	Elementary Principal	Al Switalla	Custodian
Ken Haugom	Asst. High School Principal	Tracy Tronnes	Community Leader/Parent
Debra Johnson	Community Leader/Parent	Kathy Wilke	Middle School Teacher

Dr. Norman L. Fjelstad, Superintendent - Internal Facilitator

HOW WILL THIS WORK?

1. A team of thirty-four members, representing a microcosm of our community, met for three days in October, 1992 to begin strategic planning.

2. From now until January, members of the Planning Team will share the *draft* of the Strategic Plan with the community, students, and school staff. We want you to reflect on our work. We need your ideas and perspectives.

3. Beginning January, 1993, Action Teams will be established to develop the specific plans necessary to implement the strategies identified by the Strategic Planning Team. These action plans, written by teams of educators, students and citizens, will create our school district's future.

4. In May, 1993, the Strategic Planning Team will come together again to review community and staff reaction, the reports from the various Action Teams, and confirm that the directions being developed for the future will, in fact, bring us to where we want to be in the future.

5. The final plan will be presented to the Board of Education in June, 1993.

6. Each year, the Strategic Planning Team will meet to determine if additional Action Plans need to be developed and supported. Each year the plan will be updated.

WE BELIEVE THAT

1. **The needs of children are important.**

2. **A safe, caring learning environment is a basic need of all individuals.**

3. **Education is the shared responsibility of the individual, peers, family, school, community, business and society.**

4. **Education provides vehicles for lifelong learning and the attainment of goals.**

5. **Higher expectations and goals promote greater achievement.**

6. **People are connected to a global world and have talents and skills to contribute to that world.**

7. **People are ultimately responsible for their own actions.**

8. **There is dignity and worth in all honest work.**

9. **Respect of self and others and ethical conduct are vital for a diverse society to function.**

10. **A supportive "family" is important to success and happiness.**

11. **Flexibility is critical in meeting individual needs.**

MISSION STATEMENT

The Mission of the Edgerton School District is to create quality, flexible, innovative and relevant opportunities which prepare not only its graduates, but all its learners, to be knowledgeable, responsible, effective and ethical participants in the family, work and global community throughout their lives.

OBJECTIVES

1. By 1998, each student will demonstrate skills in basic living, creativity, critical thinking/problem solving, global and community awareness.
2. By 1998, upon graduating or successfully completing their individual program at Edgerton High School, learners will demonstrate the knowledge and application of skills necessary to make the transition to: employability/apprenticeship, military, technical college, and/or college.
3. By 1998, all learners will demonstrate knowledge and respect of self, others and the environment in this diverse global society with responsible and ethical conduct.
4. By 1998, all learners will demonstrate necessary skills to be effective and responsible participants in a variety of family roles and functions.

PARAMETERS

1. We always consider "what is best for kids" before making decisions.
2. Our mission/belief statements will determine the allocation of resources.
3. We will not tolerate unsafe conditions.
4. We will uphold the dignity, integrity and rights of each individual.
5. We will not tolerate ineffective employees.
6. Level philosophies, policies and procedures will be consistent with the mission/belief statement.

VOLUNTEERS NEEDED

An action team will be formed for each of the strategies listed to determine just how that strategy can best be achieved. If you wish to become an Action Team member please fill out and return this form to:

Dr. Norman L. Fjelstad, Superintendent
Edgerton Community Schools
200 Elm High Drive
Edgerton, WI 53534

Please return the bottom portion of this form by December 15, 1992.

APPLICATION FOR ACTION TEAMS FOR STRATEGIES

Indicate the strategies that you would like to address as a member of an Action Team. Place a 1 next to your first choice, and 2 and 3 next to your second and third choices. Every effort will be made to assign you to the strategy you indicated as your first choice. The Action Teams will be formed in December.

STRATEGIES

_____ **Strategy 1: We will design, implement and evaluate an innovative, flexible and relevant program which will heighten students' creativity, critical thinking, problem-solving skills and ability to transfer knowledge.**

_____ **Strategy 2: We will design, implement and evaluate an innovative, flexible and relevant program which will broaden knowledge and experiences in basic living skills, community connections and our part in global society.**

_____ **Strategy 3: We will establish a systematic goal-setting program to provide 100% of our students with the skills and knowledge to make a smooth transition toward their post-secondary choice(s).**

_____ **Strategy 4: We will integrate into the educational experience of all students appreciation of social and cultural diversity.**

_____ **Strategy 5: We will integrate into the educational experience of all students development of responsible and ethical conduct to self, others and the environment.**

_____ **Strategy 6: We will reinforce parenting skills and family relationships, and establish programs to involve all families in the educational process.**

- -

NAME__________________________ OCCUPATION__________________

ADDRESS____ ZIP__________

TELEPHONE__________________________ BEST TIME TO CALL __________

__________ 1st Choice __________ 2nd Choice __________ 3rd Choice

Action Planning

Integrated/Applied Curricula Summer Conference

June 23, 1994
University of Wisconsin-Stout
Menomonie, Wisconsin

A Step-by-Step Guide to an Action Plan

Congratulations on your decision to make an action plan an integral part of this Summer Conference. Whether you are new to action planning or have done it for some time, the information in this guide is designed to help you take control of your future by setting clear, achievable goals and take the necessary steps to attain them.

Good luck on your journey!

Why Are Action Plans So Important?

You have heard it said that if you do not know where you are going, it does not matter how you get there. However, if you have a specific destination, then you can plot a path with confidence. Action plans give shape to your destination. Nearly everyone who wishes and dreams, but without clear, specific actions ends up with it unrealized.

There are many reasons to focus your planning around action plans. Establishing action plans puts you in charge of your future and gives you direction. Achieving an action gives you a record of achievement and success, generating the confidence you need to tackle even bigger actions. Establishing and accomplishing actions enhances your self-esteem and makes you noticed by others. Setting and achieving actions fosters a sense of responsibility, reminding you that you can make things happen.

Actions also help improve your decision making since you can ask whether the proposed activity will bring you closer to your goal, or divert you from it. Actions help you focus your attention, efforts and energy on activities likely to yield the greatest payoff - so you get better results for your efforts. Focus is becoming a more critical issue in business and industry as people are inundated with increased workloads, communication, information, and conflicting demands. Actions, activities and time lines help you make the right choices when there is more to do than time to do it.

The Action Plan Process

An Action Plan begins with your vision of what you want to achieve. Once you have a clear idea of your destination, the next step is to develop specific goals that support your vision. Once you have listed your goals, you can begin to plan the action steps you will take to achieve them. Part of the planning process is learning to prioritize your goals and the action steps you need to take as you pursue them. Once you get in the habit of setting priorities as you identify action steps, you will find it much easier to plan your time. A key step in the action plan process is to identify obstacles and develop a plan for overcoming them. Finally, a time line for accomplishing your goals and activities is a must.

Visions + Goals + Action Steps - Obstacles + Timelines = Action Plan

Your Destination Starts With a Vision

The first step in developing an action plan is developing a vision of what you want your future to be. If you draw a picture of what curriculum would be like one year from now, what would it look like? If you see yourself working in a team developing curriculum, what would that look like? Your vision should truly be an aspiration - something that will get you excited and motivate you to do your best. Your vision will determine your goals and activities you establish.

Creating a Vision Statement

Recently, many organizations have started talking about "vision," sometimes without defining it very clearly. We might define "vision" as "your view of what your integrated and applied curriculum might look like in a year." Your vision is important because it helps visualize your ideal, your peak-performance, helps you choose what is most important to you; and empowers you to make things happen. When creating your vision statement, set aside the obstacles you see and the limitations. Your vision should aim high--it should excite and motivate you. After all, it will provide focus for the goals you set--and those goals will drive your day-to-day activities.

Examples of Vision

History books and athletic records provide numerous examples of individuals who had a vision, set goals, and took the steps needed to achieve them. Martin Luther King had a vision of people of all races living together in harmony and equality. Although Dr. King did not live to see his vision become reality, his dream continues to inspire Americans to continue the struggle. Lee Iacocca joined Chrysler Corporation with a vision of creating a profitable company and revolutionizing the American automobile. According to recent market research, Chrysler minivans make up the largest number of family cars on the road today. Perhaps the most visible examples of visions realized are in the realm of sports. Young athletes start with a vision of winning an Olympic medal, making the winning touchdown for a pro football team, or being the highest scorer in the NBA. Once they have defined their vision, these athletes develop specific goals, identify the steps needed to achieve them, and use self-discipline and determination to follow their plan to a successful conclusion.

The exercises below will help you crystallize your vision of your curriculum integrated future.

Exercises:

1. Using a separate sheet of paper, take just a few minutes to brainstorm what you want to achieve (product), or experience (process), with integrated and applied curriculum in your school or district. List these in any order, leaving space after each one. Home teams may decide to do this in a group.

   Now, go back and ask yourself **why** you want to achieve or experience each one. Jot down your reasons. If you can not explain why you want one or more of the items (or do not like your answer), consider eliminating it from your list.

2. Using the space below, write your own answer to the question "What is success for me, or to my home team, in terms of integrated and applied curriculum"? In other words, how would you know if they had been accomplished. (Some of the elements are probably included in your list from Exercise #1.)

3. Now, using your, or your home team's, definition of success and your list of what you want to achieve, or experience, with integrated and applied curriculum (from Exercise 1), write a vision statement below. (You might want to answer the question, "If I could be the best integrated and applied curriculum, what would it look like?") Disregard for now any obstacles or limitations--answer as if there were no limits!

My/our vision is:

How You Can Build Success Into Your Goal Setting

You can make sure your goals are aimed for success by following a few simple guidelines:

1. It is critically important to **write your goals down** (where you will refer to them). It is easy to think "I know what my goals are-I do not need to put them in writing." But human nature being what it is, goals that remain mere dreams are less likely to get priority attention when you have to make decisions about how to spend your time. Putting your goals in writing is the first step in making the commitment necessary to see them through to completion.

2. **Take ownership of your goals.** You can "own" a goal even if you did not originate it. In business, it is quite common for broad goals to be set by upper management. Other managers, supervisors, and employees take ownership when they define the goal in terms of what they need to contribute, and take responsibility for making it happen.

3. **Make sure your curriculum goals are "in sync" with your organization's goals.** In order to do so, you will need to understand what your organization's long- and short-term goals are, and how your contribution fits into the picture. This may require having a conversation with your chair, building principle, etc., about department priorities. This will prevent you from spinning your wheels, working on goals that are high on your list but do not contribute significantly to department or school goals.

4. If you do not have much experience with setting and achieving goals, or do not feel confident in you ability to set goals and accomplish them, **start with small, achievable goals.**

5. As you set your goals, **build in timelines** you can meet on your way to the goal. The timeline will serve as checkpoints where you can assess your progress and determine if you are still on course. This will give you a sense of accomplishment and satisfaction as you work to achieve the larger goal. This technique is particularly valuable when working on significant

or long-term goals, and is critically important for large, complex projects like a curriculum project can turn into.

6. **Develop ways to monitor progress and measure results.** As you are planning your goals, think about specific ways you can measure progress prior to completion. How will you know how much of the work is done and how much longer it will take? How will you know when you have arrived at your goal? Make it easy to tune into warning signs so you can amend your plan while there is still time.

7. **Visualize yourself attaining the goal.** Recent research with winning athletes has demonstrated that mental pictures of peak performance have the power to increase actual performance significantly. Athletes are taught to visualize themselves making the perfect dive, skating the perfect program, or crossing the finish line in record time. You can apply this simple technique to your own goals. Take the time to clearly picture yourself reaching the goals you have set and enjoying the benefits of them. For some people, the biggest obstacle to achieving a goal is simply believing that they will achieve it.

8. **Keep your goal(s) in front of you.** The secret to achieving a goal is focus--and it is much easier to focus on a goal when it is constantly in sight. Goals that are prominently displayed where you can not miss them serve as a reminder of your priorities when other distractions arise, or when you have to make decisions about how to spend your time.

9. **Link your goal(s) to routine planning.** This is the place where many well-intentioned goal-setters "drop the ball." Ultimately, even the most far-reaching goals are achieved one step at a time. That means that the steps needed to achieve your goals must be integrated into your routine planning. Planning priority tasks into your routine takes just a few minutes--and dramatically increases the likelihood of your staying on target.

10. **Involve those whose cooperation is needed.** Many goals require help, or cooperation from others. Often, family, other teachers, aids, principals, and curriculum specialists can either help, or hinder your efforts; the earlier you involve them as part of the goal-setting process, the more likely you are to get the cooperation you need. Sometimes, you will even discover a better way to accomplish your goal!

What Should a Goal Look Like?

It might be helpful to think of successful goals in terms of an acronym-**SMART**. To set you on course for success your goals should be:

Specific
Measurable
Achievable
Relevant
Time-bounded

Let's take a closer look at these characteristics.

Specific: You are going to be spending considerable time working toward your goals, so it is important to specify exactly what the goal is. It is not enough to say that you want to be a "key player" in the development and implementation of integrated and applied curriculum. How do you want to be involved? What portions will you write? Will you implement it? In order to determine the steps you need to take, you need to know exactly where you are going. If you say "spending more time with curriculum writing" is so general, it is likely to become another forgotten good intention. A more specific goal would be "spending four hours each week on curriculum writing," or, "spending at least one hour per week in curriculum planning with another teacher."

Measurable: How will you know when you've achieved your goal? It is easy if you build in a way to measure it. "The integrated and applied curriculum will be approved by the English and Science Departments on January 7, 1995." Our home team will conduct the in-service on August 25, September 10 and October 1, 1994."

Achievable: For the most part, you are the person who has to decide whether a goal is achievable or not. Motivational speakers tell inspiring stories of athletes, entrepreneurs, and physically challenged people who achieved the "impossible" because they believed they could do it, set clear goals, and pursued them with determination, refusing to let obstacles stop them. It is true that in order to inspire and motivate, goals need to be challenging. But it is also true that pursuing a goal that is completely out of reach can sidetrack you from achieving other, more achievable goals--with the result that you do not reach any goal at all.

Relevant: When you consider all the things you **could** do, you could probably write a list of hundreds of worthy goals. In deciding which goals to pursue, you need to measure potential goals against your personal vision, and in the case of curriculum goals, against your department/ school's goals. If the goal you are considering is not relevant to your vision, or to your organization's objectives, you should replace it with goals that are relevant.

Time-Bounded: Deadlines are critical to achieving goals. Without a timeline, goals are likely to become mere dreams: "Oh, it does not matter; I will get to it sometime." Which meeting do you think is more likely to take place?

"I will call Monday afternoon to confirm Tuesday's meeting"
or
"I will give you a call sometime to set a date"

In general an effective goal follows this formula:

By _________ (when) I will complete _________ (what).

Examples:

- Work with home team to implement curriculum by January, 1995.
- Spend two hours a week over the next semester with the communications teacher to work on curriculum (implement in January, 1995).
- Develop 6 integrated activities which incorporate math, science and technology by March 1, 1995.
- Mentor 5 other department teachers in integrated curriculum and develop five units by February 15, 1995.

Exercise:

Which of the following goals meet all the criteria (SMART)? Which criteria are missing on the goals that don't add up?

1. _____ Develop integrated curriculum.
2. _____ Conduct session on assessment strategies and techniques.
3. _____ Conduct departmental training session on "Team Building Skills" by January, 1996.
4. _____ Meet with home team members two hours, once a week during September-December, 1994 to work on curriculum.

Goal Planning Practice:

Please take a few moments to list your two to three most important goals related to integrated and applied curriculum.

____

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Prioritizing Goals

Since human limitations prevent you from putting maximum effort into everything at the same time, it makes sense to prioritize your goals and activities. Here are a few issues to consider as you determine your own priorities.

What Are My Highest Priorities?

1. Is there a hard-and-fast, make-or-break deadline? What will happen if the task/goal isn't completed on time?

2. What are the consequences of **not** doing this task, or achieving this goal? How important are these consequences to my career? To my future plans and sense of self-esteem? To my vision?

3. Is there a way to divide the goal, or task into smaller parts, and do **part** of it now and part when there are not so many other pressing priorities?

4. Is there some way I can delegate part of the task or get someone else to help me accomplish it?

5. Which of these seemingly equal priorities will have the greatest long-term impact on my vision and on my career/personal goals? Which will have the greatest short-term impact?

6. Which of these tasks or goals have the potential to become problems if delayed for too long?

Breaking Goals Into Action Steps

When planning how you will achieve a goal, it helps to start by asking yourself the following 5 questions.

1. What do I need to do?

2. What do I need to know?
3. What are the potential obstacles?
4. Who else needs to be involved?
5. When must the goal be completed?

Exercise:

Choose one of your, or your team's, goals. List the 5 questions above on a piece of paper with plenty of space between. Then, using key words and phrases, jot down everything you can think of under each question. These notes will direct you toward the information you need to gather and the problems you need to solve to arrive at your goal.

Next, brainstorm the major steps needed to complete your or your team's, goal list them in any order as you think of them. Once you feel your list is complete, rearrange the steps in logical order, starting with the first thing you need to do and ending with goal achievement. It may be helpful to do your brainstorming on individual stick-on notes so you can easily arrange them in any order. This technique lets you try out several arrangements of the steps before arriving at a final plan.

Now you have an outline of action steps. Attach a start and completion date to each step, and you will have a master plan for arriving at your goal.

Identifying And Overcoming Obstacles To Achieving Your Goals

You will be able to create a more realistic plan for achieving your goal by anticipating potential obstacles and developing ways to overcome or sidestep them. Start by identifying personal and environmental (or situational) obstacles. Getting support of a peer teacher, or building principal may be essential. If you do not have their support, they might be an obstacle. Develop an action step to bring the peer teacher or building principal on board.

You Are On Your Way!

You've made the commitment to setting goals, identifying action steps, obstacles and timelines. You have pinpointed your most important goals and learned how to make them specific, measurable, achievable, relevant, and time-bounded. You have identified the intermediate steps necessary to achieve your goals and setting priorities.

Now it is time to put these techniques to work where it counts--on the job and extend what you have learned from this workshop. The results should be very rewarding to you, your building, district and students. But if you should have any questions about your action plan, we invite you to call Al Gilbertson at 715-232-1382. The Center for Vocational, Technical and Adult Education at Stout is here to support you in your action planning...and we wish you every success.

ACTION PLAN Date ____________

Home Team Members ____

____

Leader ____________________ Address ____________________ Phone # ____________

Vision

Mission

ACTION PLAN

Date ______________

Home Team Members ____

____

Leader ____________________ Address ____________________ Phone # ______________

Goal # ____

ACTION STEPS	OBSTACLES	TIMELINE

ACTION PLAN

Date ______________________

Home Team Members ____

____

Leader ______________________ Address ______________________ Phone # ______________

Goal # ____

ACTION STEPS	OBSTACLES	TIMELINE

ACTION PLAN

Date ____________________

Home Team Members ____

____

Leader ____________________ Address ____________________ Phone # ____________________

Goal # ____

ACTION STEPS	OBSTACLES	TIMELINE

ACTION PLAN

Date ____________________

Home Team Members ____

____

Leader ____________________ Address ____________________ Phone # ____________________

Goal # ____

ACTION STEPS	OBSTACLES	TIMELINE

6/23/94

EVALUATION

Integrated/Applied Curricula Summer Conference

Please rate the sessions according to the following scale:

5=E=Excellent	2=F=Fair
4=VG=Very Good	1=P=Poor
3=G=Good	

Session	Response				
	E 5	VG 4	G 3	F 2	P 1
Please circle your response for each item.					
Monday, June 20					
1. Keynote speaker: "Curriculum Change: Innovations, Integration and Application."	5	4	3	2	1
2. Team Building Skills	5	4	3	2	1
3. Team Building Simulation	5	4	3	2	1
4. WI Integrated and Applied Curriculum Development Process - The Framework and Process for Integrated and Applied Curricula Model	5	4	3	2	1
Tuesday, June 21					
5. Panel Presentation on WI Integrated and Applied Curriculum Development Process	5	4	3	2	1
6. Home Team Work on Applying the Process to Their Schools	5	4	3	2	1
7. Share and Tell	5	4	3	2	1
8. Teaching Strategies for Integrated and Applied Curriculum Materials - Cooperative Learning	5	4	3	2	1
9-15. Special Interest Sessions. Rate Each Session Attended.					
9. Learning Styles	5	4	3	2	1
10. Needs Assessment Techniques	5	4	3	2	1
11. Leadership Styles	5	4	3	2	1
12. Multiple Intelligences	5	4	3	2	1
13. Tie in WI Developmental Guidance Model with Learner Outcomes	5	4	3	2	1
14. Teaching Strategies	5	4	3	2	1
15. Integration Techniques	5	4	3	2	1
16. DACUM	5	4	3	2	1

. . . GO TO NEXT PAGE. . .

Session	Response E 5	 VG 4	 G 3	 F 2	 P 1
Please circle your response for each item.					
Wednesday, June 22					
17. Authentic Assessment - Strategies and Tools	5	4	3	2	1
18. Home Team Work on Strategies, etc.	5	4	3	2	1
19. Share and Tell	5	4	3	2	1
20. Organizational and Personal Change	5	4	3	2	1
21. Work Session - Application of Change Techniques	5	4	3	2	1
22. 7 Habits of Highly Effective People	5	4	3	2	1
23. Mentoring	5	4	3	2	1
Thursday, June 23					
24. Roles of the Integration and Applied Curriculum Leadership Cadre	5	4	3	2	1
25. Strategic Planning Techniques	5	4	3	2	1
26. Home Team Work on Strategic Plans	5	4	3	2	1
27. Action Planning	5	4	3	2	1
28. Home Team Work on Action Plans	5	4	3	2	1
29. Overall Rating of Conference	5	4	3	2	1
30. Breaks	5	4	3	2	1
31. Facilities	5	4	3	2	1

32. Please write any comments regarding any of the sessions below:

. . .GO TO NEXT PAGE. . .

33. Finally, having attended this conference, please indicate areas that you feel you need to receive additional information in order to accomplish trainer responsibilities.

Thank you. Please return this form to one of the conference facilitators.

Have a safe trip home.

Wisconsin

Integrated and Applied Curricula Project

Department of Public Instruction/Wisconsin Technical College System

In Cooperation with the Center for
Vocational, Technical and Adult Education,
at the University of Wisconsin-Stout

UW-STOUT
Menomonie
Wisconsin

Issues this Certificate on
June 23, 1994
to

In Recognition for Participation at
the Integrated and Applied Curricula Conference at
the University of Wisconsin-Stout on June 20-23, 1994

Mike Galloy, Project Director